Service Manual 9210

Service Level 2

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Introduction

The purpose of this document is to give Nokia service level 2 workshops aids to carry out service for 9210. The use of this Service Manual is only for Nokia authorized service partners additionally to other service documentation like Service Bulletins.

While every endeavor has been made to ensure the accuracy of this document, some errors may exist. If you find any errors or if you have further suggestions, Nokia should be notified. Please keep in mind also that this documentation is continuously being updated and modified, so watch always out for the newest version.

Warnings and Cautions

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

Warnings:

1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI-SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.
2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.
3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

Cautions:

1. Servicing and alignment must be undertaken by qualified personnel only.
2. Ensure all work is carried out at an anti-static workstation and that an anti-static wrist strap is worn.
3. Ensure solder, wire, or foreign matter does not enter the telephone as damage may result.
4. Use only approved components as specified in the parts list.
5. Ensure all components, modules screws and insulators are correctly re-fitted after servicing and alignment. Ensure all cables and wires are repositioned correctly.
6. All PC's used with NMP Service Software for this produce must be bios and operating system "Year 2000 Compliant".

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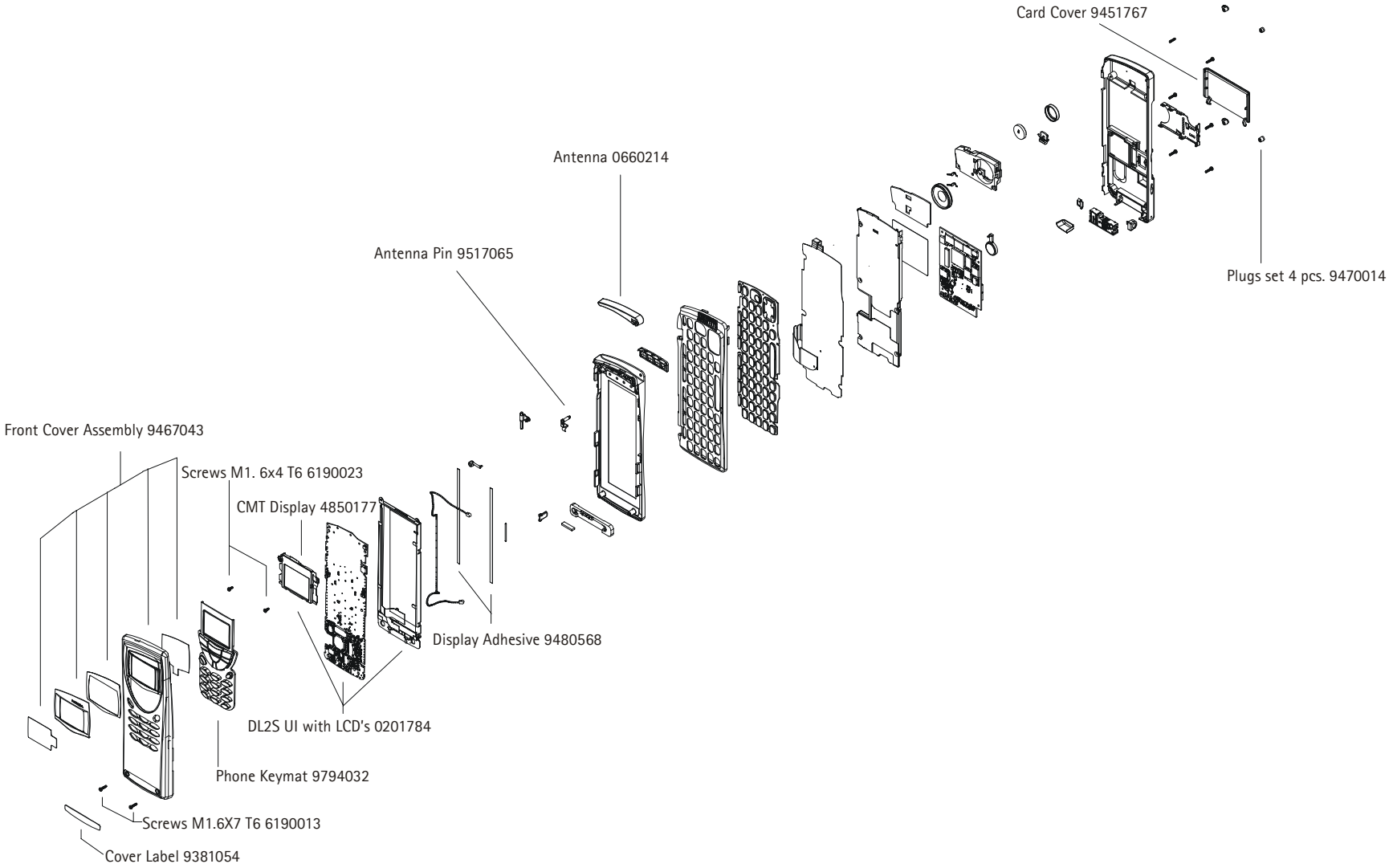
1. EXPLODED VIEW AND PARTSLIST



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2. BILL OF REPAIR

PART NO	PG	PART NAME
0201784	70	DL2S UI WITH LCDS LINDA SPARE
9517065	24	ANTENNA PIN RAE-3
0660214	36	ANTENNA TURN.900/1800MHZ GSM/PCN
9794032	44	PHONE KEYMAT DMC02629 RAE-3
6190013	11	SCREW M1.6X7 DMD01749 T6 FEZN BLK
6190023	11	SCREW M1.6X4
9381054	11	COVER LABEL DMD05169 RAE-3
4850177	46	CMT DISPLAY
9451767	17	CARD COVER DMD05146 RAE-3
9467043	44	FRONT COVER ASSY DMC02517 RAE-3
9470114	22	PLUG DMD05262 RAE-3
9480568	17	DISPLAY ADHESIVE

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3. ACCESSORIES

For the list of Service Tools please refer to the Extranet document:
Service Tools Level 1.

General Accessories

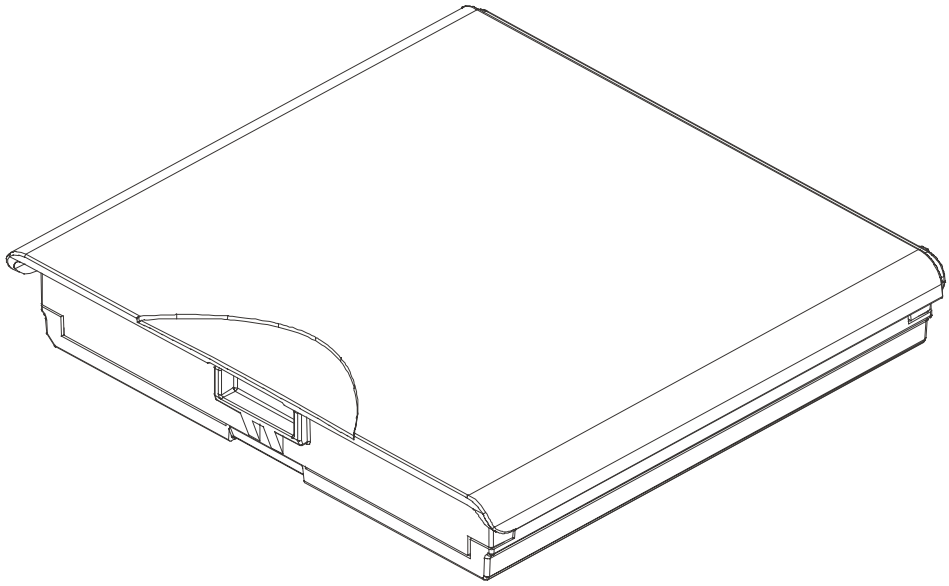
Battery Pack BLL-3

BLL-3 is a lithium ion battery with 1300 mAh capacity.

Product Codes

Battery Pack BLL-3 (English label)	0670290
Battery Pack BLL-3 (French label)	0670363

View of BLL-3



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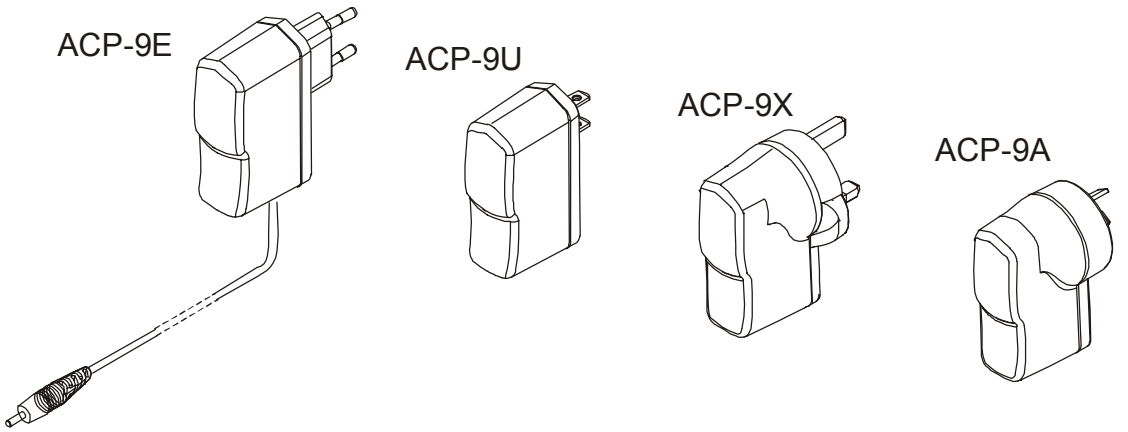
Fast Travel Charger ACP-9

Operating within the voltage range 90 V...264 V AC (50 Hz...60 Hz), the Fast Travel Charger is practically current independent in normal office and household use. Like the standard charger, it is compatible with all battery options and is available for different wall sockets.

The Fast Travel Charger can also be used with basic stand and desktop stand.

Fast Travel Charger (Euro plug) 90-264 Vac	ACP-9E	0675151
Fast Travel Charger (Chinese plug) 90-264 Vac	ACP-9C	0675204
Fast Travel Charger (UK plug) 90-264 Vac	ACP-9X	0675150
Fast Travel Charger (Australia) 90-264 Vac	ACP-9A	0675152
Output cable (supplied with ACP-9):	*PCC-1*	*0730076*



Output connectors: *3.5 mm DC plug, 3-pole (+, -, control)*

Protection: *output current limiting, max. 850 mA*
output voltage limiting, max. 9.3 V (unloaded)

Output voltage/current (typ): *8.4 V / 800 mA*

Weight approx. with cable *100 g*

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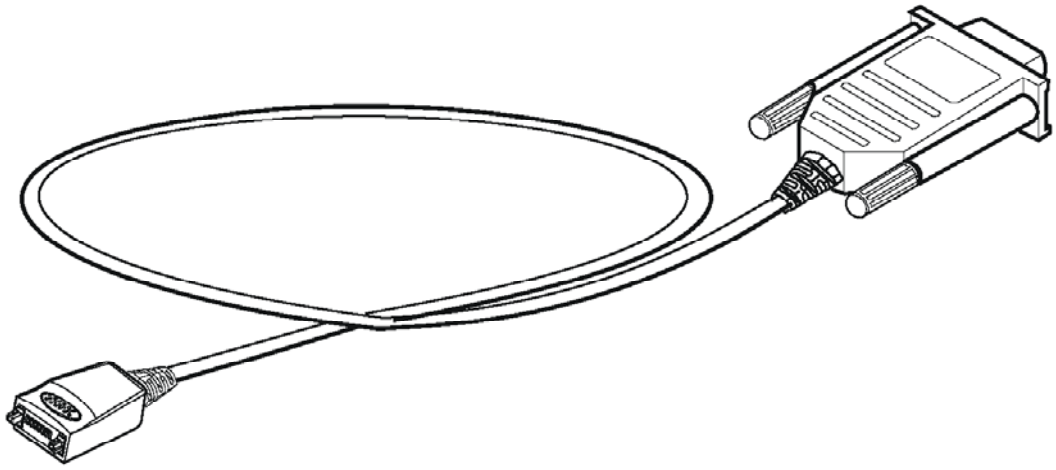
Data Cable DLR-2

RS-232 Data cable DLR-2 to be used for PC connectivity and fax mode. Connected between PC serial port and transceiver system connector.

Product Code

Data Cable DLR-2: 0730132

View of DLR-2



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Memory Card DTS-16

The PDA includes a synchronous serial interface that is compatible with the Multimedia Card Bus (MMC) Protocol. The MMC is a changeable Flash or ROM memory card with variable memory size, DTS-16 memory capacity is 16Mbytes The MMC connector is located on the BS8 Module.

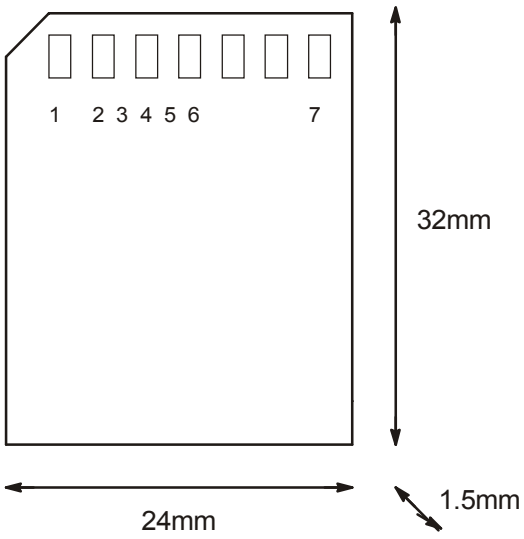
Note: The same part is used for RAE-2 communicator. The media is electrically and mechanically compatible. However the data format is different.

RAE-3 is compatible with 4MByte and 8MByte cards also.

Product Code

Memory Card DTS-16: 0271658

View of DTS-16



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Portable Accessories

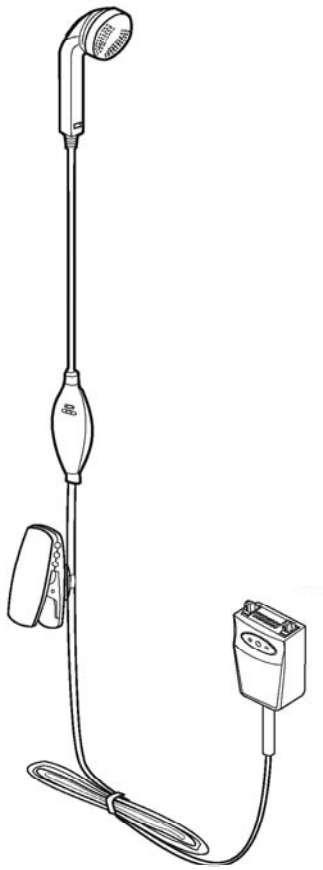
Audio Headset HDC-8L

The audio headset can be used for normal voice calls instead of the PC audio.

Product Code

Headset HDC-8L *0271368*

View of HDC-9



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Mobile Charger LCH-9

Charging adapter for car environment;

Input voltage	9...32 V
Output voltage	7.8 V /+1.4V/–1.0V)
Charger type	Switching mode power supply
Operation	quick charge (< 0.5-2.5 h), trickle charge
Protection	input fused, output current limit

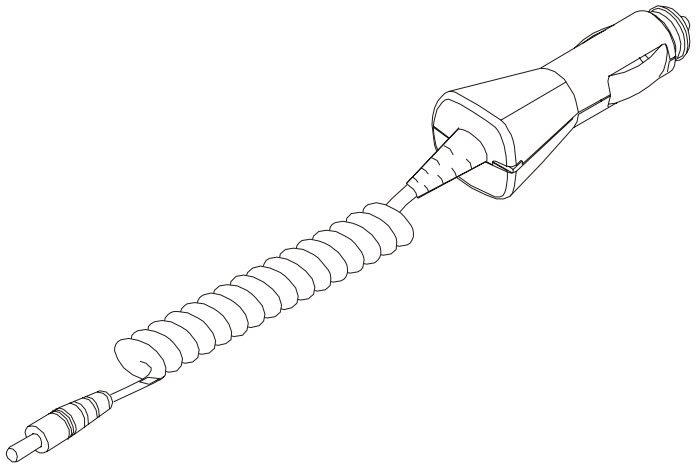
Green LED indicating input voltage on

Weight	Appx. 78g

Product Code

Portable charger LCH-9	0675005

View of LCH-9



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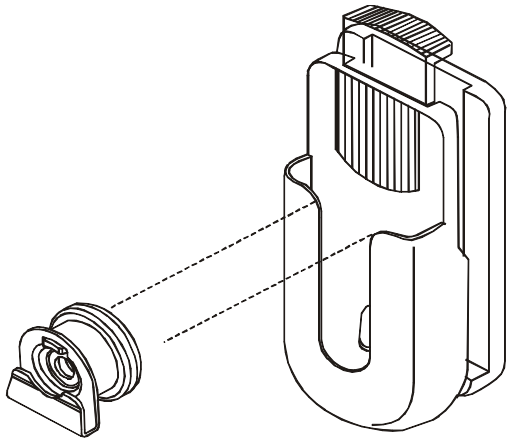
Belt Clip BCH-17

Used to carry the phone on belt. Installation Belt clip is fixed to belt. The counterpiece is fixed to B cover of the transceiver. The belt part is equipped with a latch to ensure firm retention and easy removal.

Product Code

Belt Clip BCH-17: 0271664

View of BCH-17



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Carry Case CBR-44

Used to carry the phone on belt.

Product Code

Carry Case CBR-44 0720262

View of CBR-44

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Office Use Accessories

Desktop Stand DCH-10

The desktop stand DCH-10 is designed for calendar data synchronization between a PC and a Communicator with a button press.

The front slot holds and charges the phone, and the rear slot holds and charges a spare battery.

The desk stand includes red and green LEDs to show the status of the spare battery charging in the rear slot.

The desk stand supports charging of 4.1V and 4.2V lithium-ion batteries.

The desk stand is powered by an external ACP-9 type charger.

When a RAE-3 is placed in the front slot it is charged at the same rate as if the external charger was connected directly to the phone. When a spare BLL-3 battery is placed in the rear slot, it is charged at a slower rate. Charging of the spare battery is delayed until the phone has finished charging.

The front slot provides data connection between the deskstand connected PC and the RAE-3. The host PC is connected by Nokia data cable to the rear of the desk stand. The PC must have the Nokia ”Share” software running for the data transfer to the PC to be successful.

Product Code

Desktop stand DCH-10	0675209
Desktop stand DCH-10 (chinese variant)	0675222

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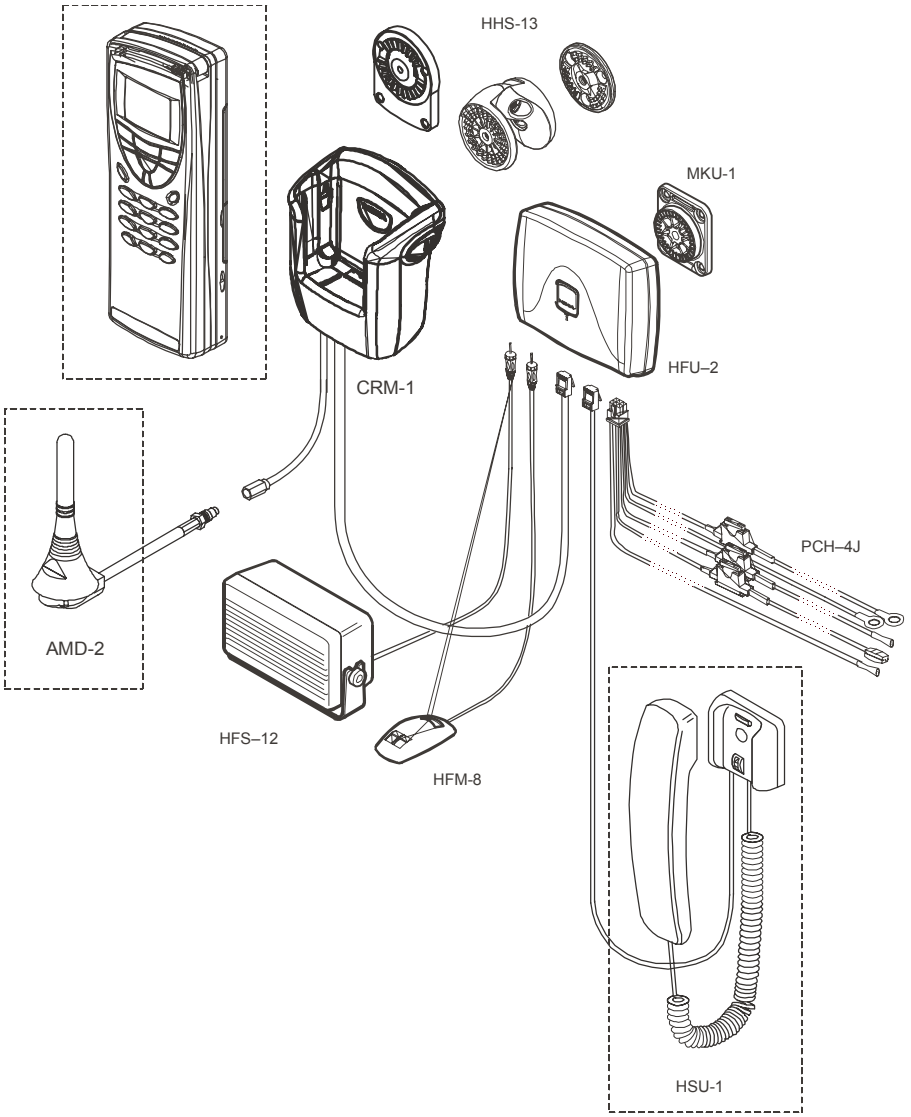
Advanced Handsfree Car Installation Kit CARK109



Item:	Accessory:	Type	Product code:
1	Active Car Cradle	CRM-1	0630220
2	Handsfree Unit	HFU-2	0694049
3	Handsfree Microphone	HFM–8	0690016
4	Handsfree Speaker	HFS-12	0692008
5	Power Cable	PCH-4J	0730055
6	Swivel mount	HHS-13	0620055
7	Mounting Plate	DMS00601	0620036
8	Active Handset (Optional)	HSU–1	0730091

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Advanced Active Car Holder CRM-1

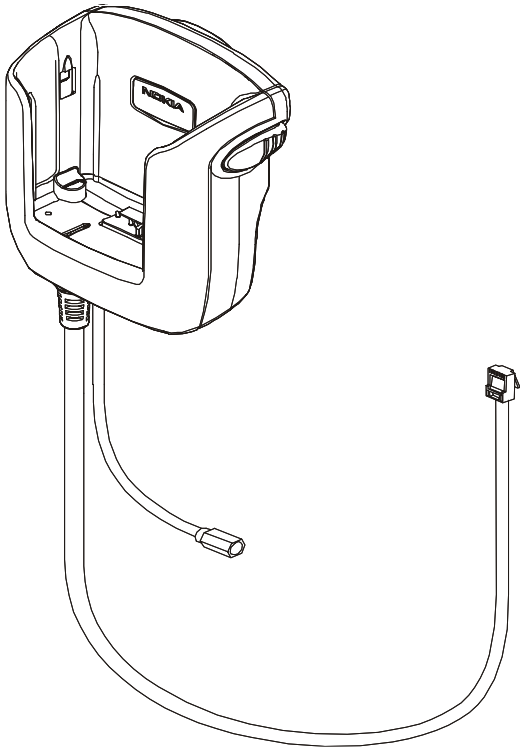
The holder for the mobile phone is attached to the vehicle's interior in a convenient position using the swivel mount HHS-13. The mounting is secured with a screw (included with HHS-13).

The cable with the plug-in connector from CRM-1 connects to the **PHONE** socket in HFU-2. (The other cable from CRM-1 connects to the external antenna.)

Product Code

Active Car Holder CRM-1	0630220

View of CRM-1



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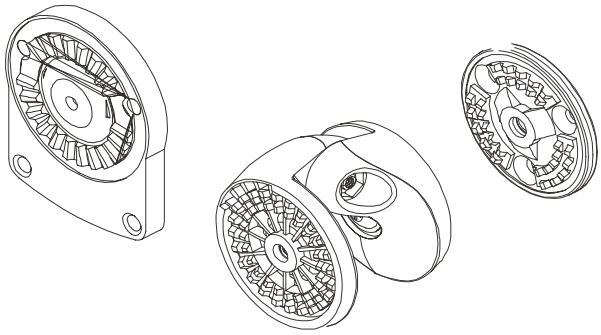
Swivel Mount HHS-13

HHS-13 offers two installation methods for the holder CRM-1. Either use all components to make a swivel mount, or use the flat mounting plate for a fixed position.

Product Code

Swivel Mount HHS-13	0620055

View of HHS-13



Mounting plate MKU-1

The handsfree unit HFU-2 can be attached to the vehicle interior using the mounting plate MKU-1.

Product Code

Mounting plate MKU-1	0620036

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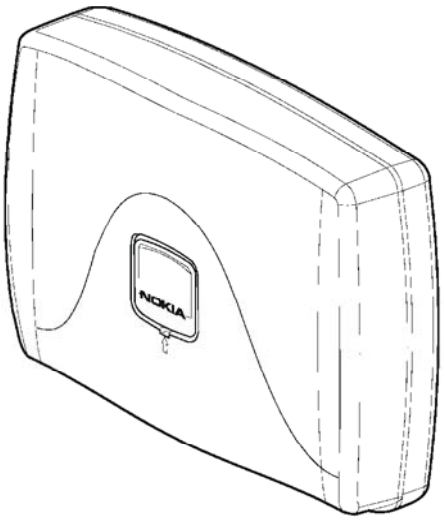
Advanced HF Unit HFU-2

The handsfree unit HFU-2 enables the phone to operate in handsfree mode and it is attached to the vehicle interior using the mounting plate MKU-1.

Product Code

Advanced HF Unit HFU-2	0694049

View of HFU-2



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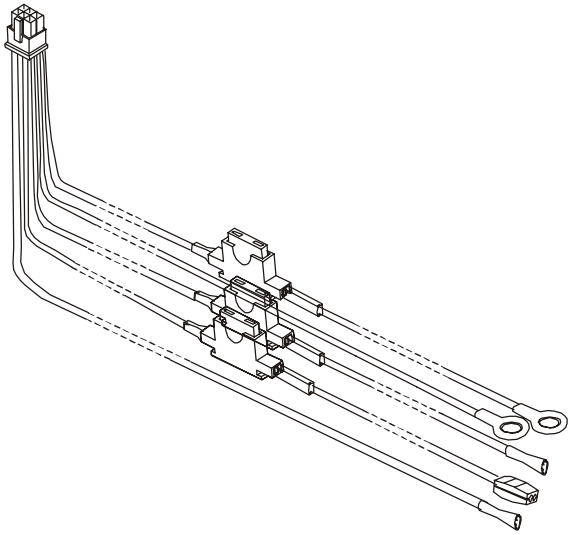
Power Cable PCH-4J

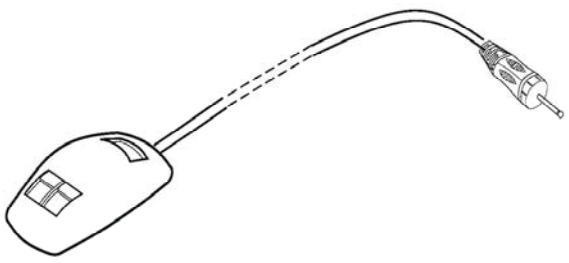
The power cable connects to the **DC** socket in HFU-2 and to the vehicle's power supply. See section "Installation" for more information.

Product Code

Power Cable PCH-4J	0730055

View of PCH-4J





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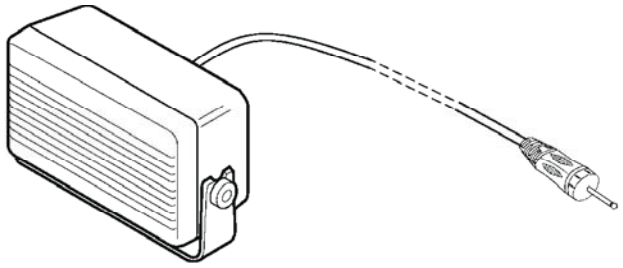
External HF Speaker HFS-12

The external HF speaker connects to the **SPEAKER** socket in HFU-2. Twist the plug clockwise to lock firmly in place.

Product Code

External HF speaker HFS-12	0692008

View of HFS-12



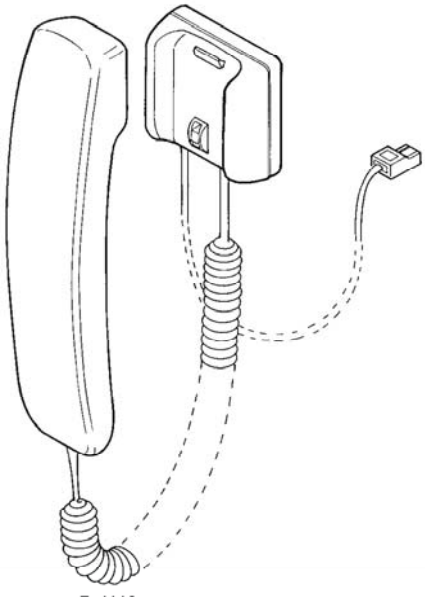
Handset HSU-1 (not included)

The handset HSU-1 offers more privacy during a call. It connects to the **DATA/ HANDSET** socket in HFU-2. For more information, please refer to the user guide for the handset.

Product Code

Handset HSU-1	0640047

View of HSU-1



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4. DISASSEMBLY/ASSEMBLY INSTRUCTIONS

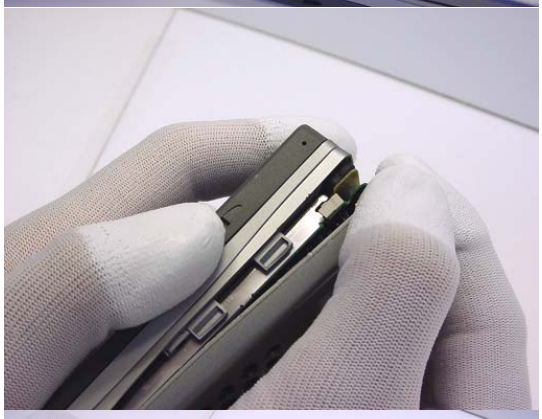
Attention: Before starting this procedure you must take care of ESD precautions like being in your ESD-area and connecting your armwrist.

1. Remove the Cover Label carefully with tweezers. Take care not to scratch the cover.

2. Remove the two screws with driver Torx T6.

Do not use the torquedriver for loosening because you can damage or decalibrate it.

3. Pull back the A-Cover from the bottom side on. You have to use a bit more power to release the cover from its clips. This is a bit tricky, so that you have to get your own experience.



4. Take away the Phone Keymat.

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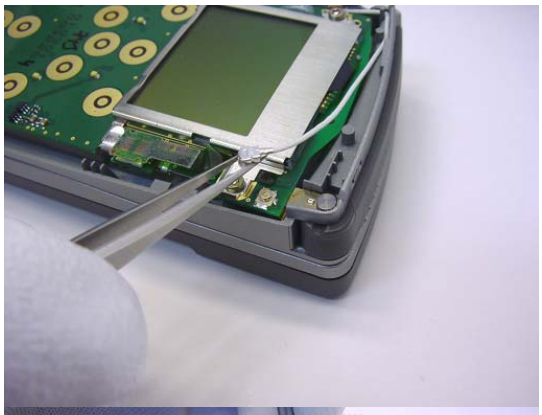
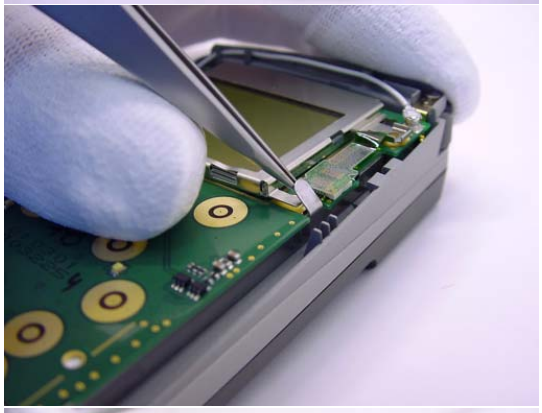
5. Unplug the Coax Connector.

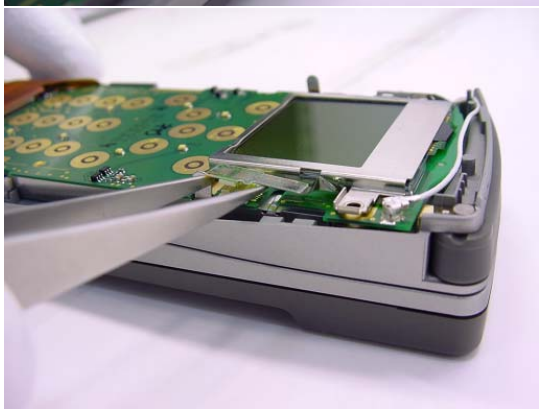


6. Open the two screws at the top of the display and protect the display with a foil against dust and scratches. If you don't want to change the CMT-Display continue with step 7.

6.1 If you want to change the CMT-Display to have to open the two metalclips at the bottom side of the display.



6.2 Carefully open the display connector X007.



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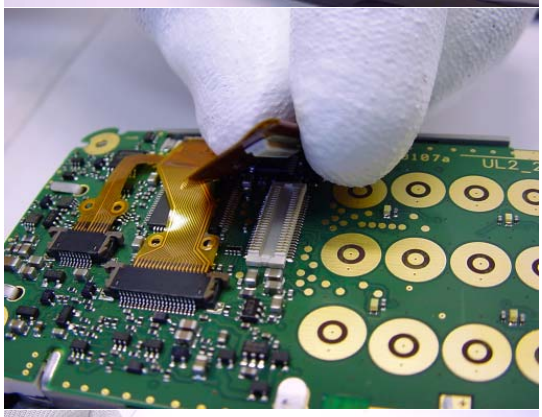
6.3 Take care of the guiding pin of the display. This is also the first step when replacing the display.

7. Open the System Connector with your fingers. Let the two other SMD-Connectors closed.



8. Press back the whole UI/Module DL2S carefully with your thumbs. Note that the PDA-Display is fixed with selfadhesive tape to the Screenframe. If the tape remains to the display you have to use new tape when changing the moule.

9. Don't try to disassemble more parts of the phone. Otherwise the whole unit has to be calibrated with special measurement equipment to fulfill the specifications.

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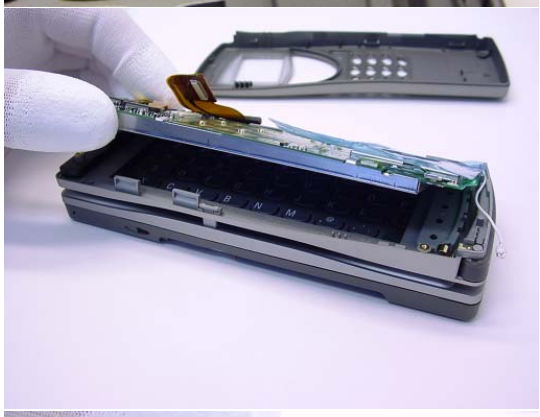
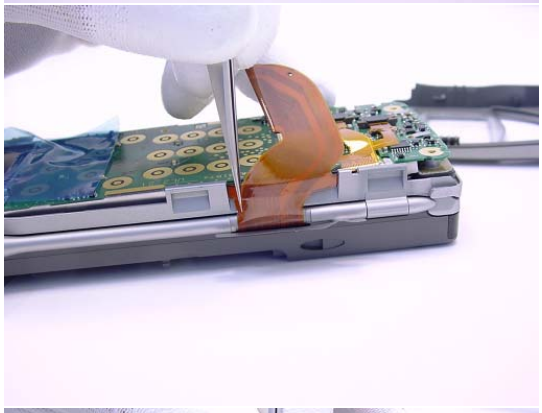
10. It is important that the Coax Cable is guided like in the photo. Otherwise it can be damaged easily when assembling the module.

11. When assembling the unit you start with putting the UI/Module into the Screenframe. Remember also to check or to use a new Display Adhesive.



12. Put the Connector Flex into its guidance. Please be careful not to destroy the flex.



13. Place the Flex Cover over the Connector Flex into the same guidance.

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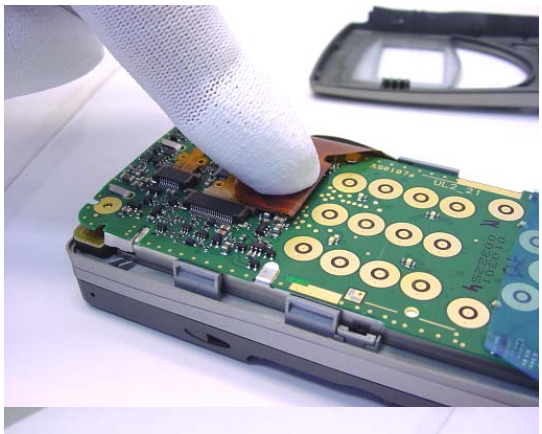
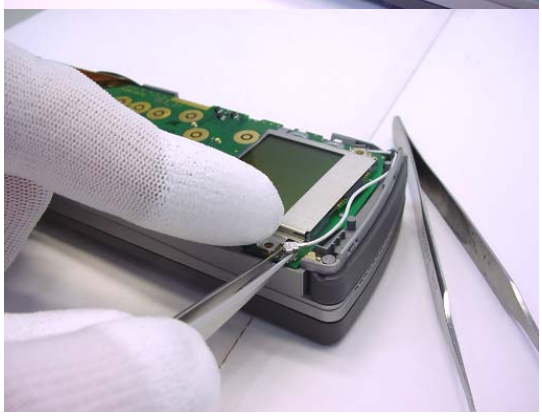
14. Plug-in the System Connector through slightly pressing it down with one finger.

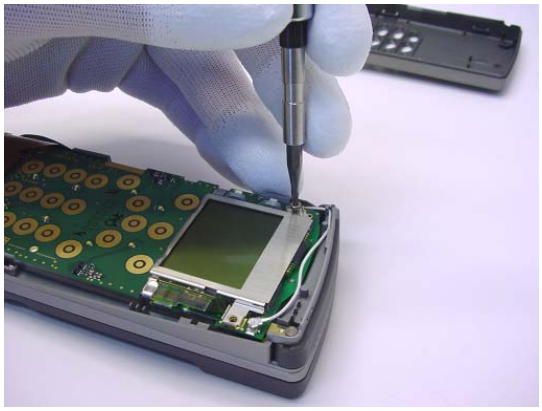


15. Plug-in the Coax Connector.



16. Set up your torquedriver with **16 Ncm** as seen in the picture. Please do not underestimate the use of the right torque. It avoids damaging the threads and ensures that all the screws are tightened constantly.

17. Now you can tighten the two display screws with **16 Ncm**.



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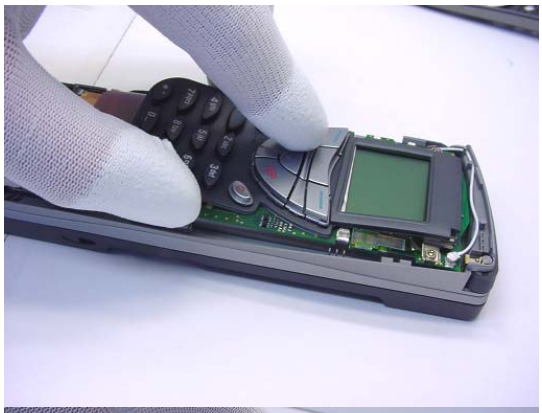
18. Replace the phone keypad.



19. Begin the replacement of the A-Cover from the antenna side on.

20. Make again sure that the Connector Flex and the Flex Cover is under the A-Cover.

21. Tighten the screws with **16 Ncm** and replace the Cover Label.

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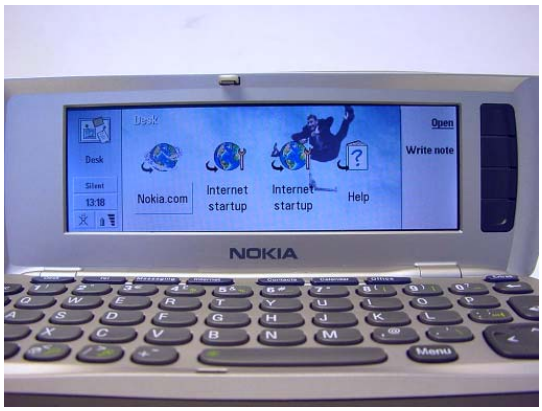
22. To complete your service actions please do the functional testing. You may have to adjust the brightness and contrast of the PDA-Display in the "control panel" when you changed the UI/Module.



23. The final GoNoGo test verifies that the electrical specifications of the product will be fulfilled.

Test OK!

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5. BACKUP OF USER DATA AND APPLICATIONS

To back up and restore user data to and from the multi media card (MMC)

Note: WinTesla service software can only save the user/phone settings (ringing tone, profile settings...etc.) and not the user data (phone book, calendar entries, etc.)
You have to save the user data to the memory card or PC-Suite.

The Backup and Restore commands will copy all data. You cannot back up or restore an individual folder. The backup and restore commands are recursive; that is, they copy folders and all the contents within the folders.

To be able to back up to and restore from a memory card, the card should be inserted in the communicator with enough empty space.

1. Press the **Office key** of the application buttons and select **File manager**.
   Open the *File manager* and then press the **Menu key** and select *Memory card > Backup to memory card... or Restore from memory card...,* depending on what you want to do. A dialog opens.
2. If you are making a backup, look for a backup folder on the memory card by pressing **Change** or type in the name of a new folder in the *Backup folder* field.
   If you are restoring data to your communicator, select the folder in the communicator into which you want to restore you data. Normally you should select the root folder.
3. Press **Backup** to back up all the communicator data to the memory card.
   Press **Restore** to restore all the backed-up memory card data to the communicator.

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6. SW-UPDATE

SW-Update with FLS-4 is currently under construction and will be updated as soon as possible.
This is the update procedure for FPS-8 Flashbox.

Service Software

General

Wintesla software is used to perform service functions of the RAE–3 PDA. This SW consists of Wintesla service software and product specific DLL's (Dynamically Linked Libraries).

To run WinTesla SW, a parallel port software protection device (PKD–1) must be connected to the PC to perform flashing functions. If only controls are necessary, RAE–3 can be controlled using equipment setup described in the WinTesla RS chapter.

The test functions send test messages from PC to MS and receive results and show them in the PC display. The messages to the phone can be sent via DAU–9C cable.

Note: if this software is to be run on laptops, the power saving feature MUST be switched off.

Hardware requirements for Windows 3.1x

The recommended minimum hardware standard to run Service Software is any computer which is 386 33 MHz or greater with at least 4 MB of memory and VGA type display (640 x 480). This assumes that only the WinTesla with After Sales Support Modules is active, i.e. other Windows packages are not running in the background.

Hardware requirements for Windows 95

The recommended minimum hardware standard to run Service Software is any computer which has Pentium processor, memory 8 MB and meets HW requirements recommended by Microsoft.

Software Environment of the Support Modules

The Service Software user interface is intended for the following environments: Microsoft Windows 3.1x (enhanced mode) and Windows 95/98 and NT. Detailed information about Windows and application usage can be found from the Microsoft Windows Users Guide.

As an ordinary Windows application, the main idea in the user interface is that selections are made with menus, push buttons and shortcut keys. Selections can be done by using keyboard and/or mouse. There is always a status bar displayed at the bottom of the main window which contains information about current actions.

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Installation

Mechanical Connections

Caution: Make sure that you have switched off the PC and the printer before making connections.

Caution: Do not connect the PKD–1 key to the serial port. You may damage your PKD–1 !

The software controls RAE–3 via a separate adapter connected to the serial port of the PC, and to the phone bottom connector (DAU–9C cable).

Attach the dongle PKD–1 to the parallel port 1 (25–pin female D–connector) of the PC. When connecting PKD–1 to the parallel port, be sure that you insert the computer side of the PKD–1 to the PC (male side). If you use a printer on parallel port 1, install the PKD–1 between the PC and your printer cable.

The PKD–1 should not affect devices working with it. If some errors occur (errors in printing are possible) please try printing without the PKD–1. If printing is OK without the PKD–1 please contact your dealer. We will offer you a new PKD–1 in exchange for your old one.

The program is delivered on a diskette and is copy protected with a dongle PKD–1. It must be present in parallel port when using Service software.

Installing the software on PC Hard Disk

The program can also be installed on the hard disk, which is recommendable to obtain a maximum data access rate.

Keep the original diskette safe to enable upgrading of the program !

If you plan to use PCL Start service software, you must install it before installing Service software, see PCL Start installation instructions.

To install the new Service software program, follow the steps below:

1.	insert the new Service software diskette into drive A: of your computer	
2.	start Windows, and open File Manager	
	log into drive a:	*type* **A:** *and press <Enter>*
3.	start INSTALL.EXE and install Service software to drive C:	*type* ***C:*** *and press <Enter>*

To install product specific DLL's, take your RAE–3 DLL disks, and repeat the steps above.

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Common Properties of the User Interface

This chapter describes how the User Interface CLF must appear to the user.

The User Interface MUST be capable of being driven without the use of a mouse, as the service engineer rarely has space on the bench to use a mouse.

Login Dialog

When the Service Software application is invoked, by checking on the Service Software icon, the **Login** dialog box (Figure 1) will be displayed on the screen.

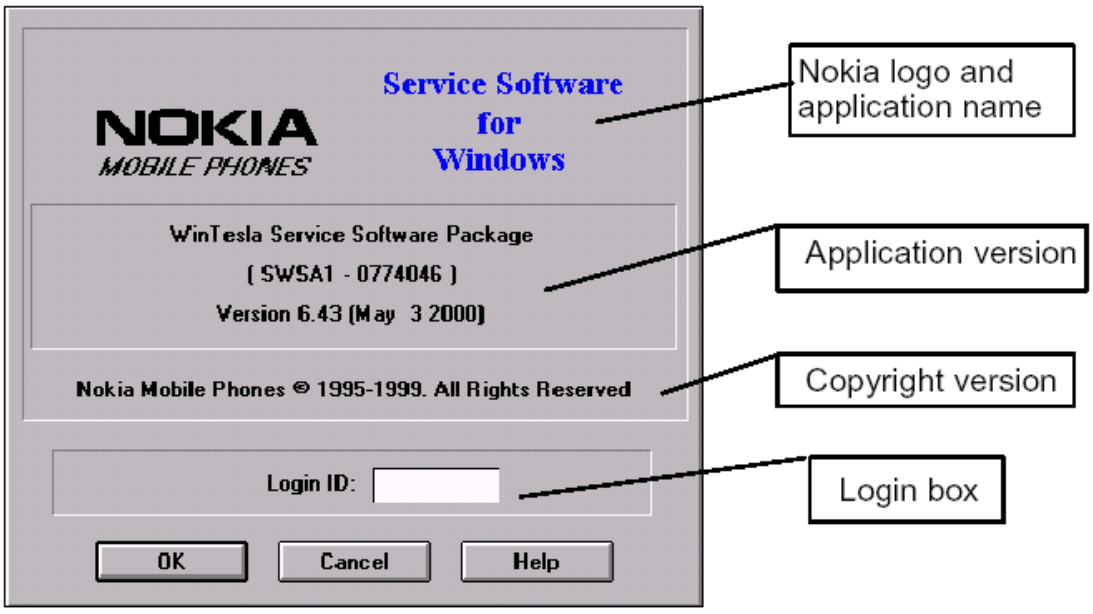

Figure 1. Login dialog box

Nokia logo and application name bitmap (–)

Displays Nokia logo and name of the application.

Application version static text (–)

Contains the name and version of the application.

Copyright notice static text (–)

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Login Box edit box (–)

The user Login ID edit box, where the user enters his faultlog user name. (See Faultlog User Guide)

OK button (default key)

The user name is stored in memory and the dialog box is closed. When the dialog box is closed, the application starts.

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Cancel button (ESC)

The Dialog box is closed and application is started, but the Faultlog feature is disabled.

Help button (F1)

Activates the Windows Help application and displays context sensitive Help.

Main Window

When Wintesla opens the basic screen, product specific DLL's must be activated using mouse to select Product –> Open and select RAE-3

Using Help

When DLL's are active, the menu bar contains several items, including help texts, as shown in Figure 2.

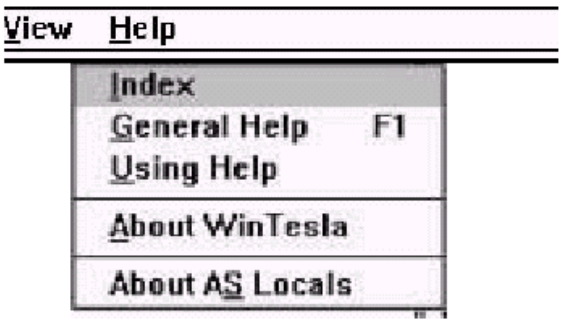

Figure 2. Menu bar

Instructions for service software use can be found in the help texts. Step by step instructions for complex operations like SW upgrades and tunings can be found in the end of this chapter.

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RAE-3 software upgrade guide

Equipment Setup instructions

1. Once a FPS–8 box is used for the first time it has to be activated according to the instructions included in the FPS–8 package.
2. Connect the box, cables and PC according to the drawing (see Figure 3)

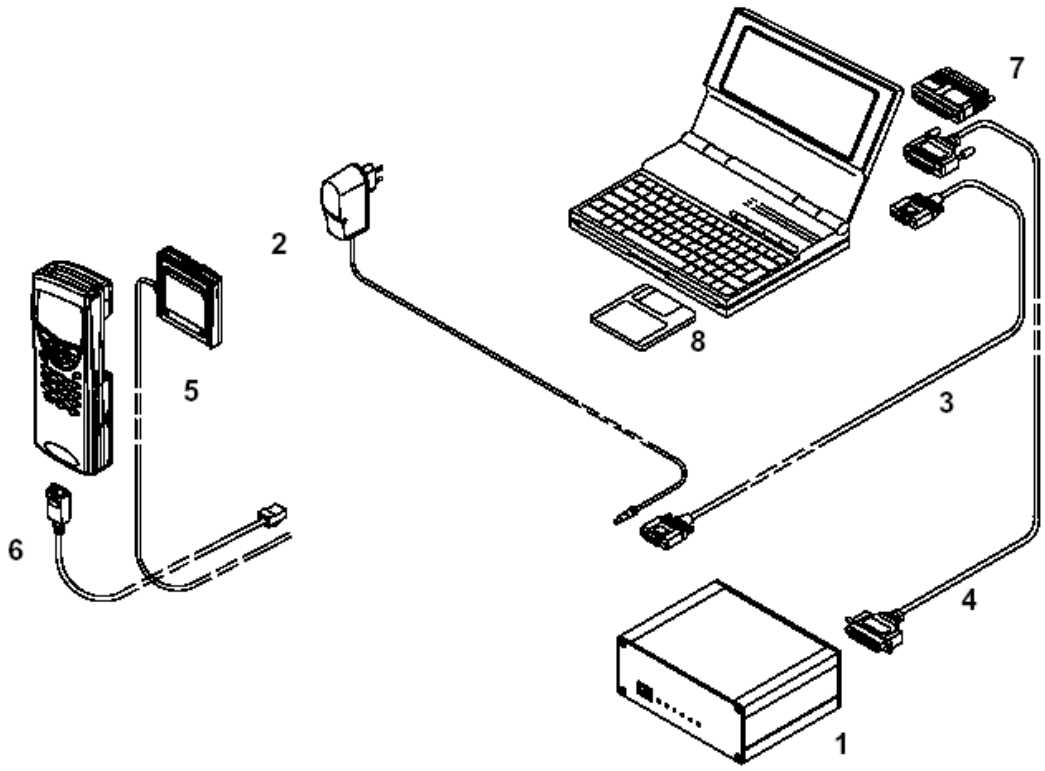

Figure 3. Flashing setup

Item:	Service accessory:	Type	Product code:
1	Prommer	FPS–8	0750123
2	AC/DC Adapter FRIWO (Included in FPS–8 sales pack)		
		FW7207/6	0680032
3	D9 – D9 Cable (Included in FPS–8 sales pack)		
		AXS–4	0730090
4	Printer Cable (Included in FPS–8 sales pack)		0730029
5	Service Battery	BBL–3B	0770206
6	Service Cable	SCH–8	0730137
7	Software protection key	PKD–1	0750018
8	Service SW diskette 3.5” for Wintesla		0774046
9	Service SW diskette 3.5” for RAE–3		0775293

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Setting up the PC

1. Install dongle drivers from CD-ROM (d:\32bit_Dongle_Driver\dk2wn32.exe –directory)
2. Install WinTesla version (version 6.43 or later) from CD-ROM (d:\wintes-la\wt_inst.exe –directory)
3. Install the RAE–3 DLL's from CD-ROM (d:\dlls\v30_80_00\Disk1\setup.exe –directory)

Setting up BUS Configuration for WinTesla

Once Wintesla is first time used the Connection from PC to FPS–8 has to be configured according to the instructions bellow (see Figure 4, Figure 5).

1. Start WinTesla software (c:\WinTesla\Stesla.exe)

Figure 4.

2. Set Bus Configuration for WinTesla according to Figure 2 below:

Open Bus Configuration –window by going **"Configure"** –> **"Buses..."**

Set COM port **"1"** , Hardware Type **"COMBOX"** and Media **"MBUS"** (see Figure 5).

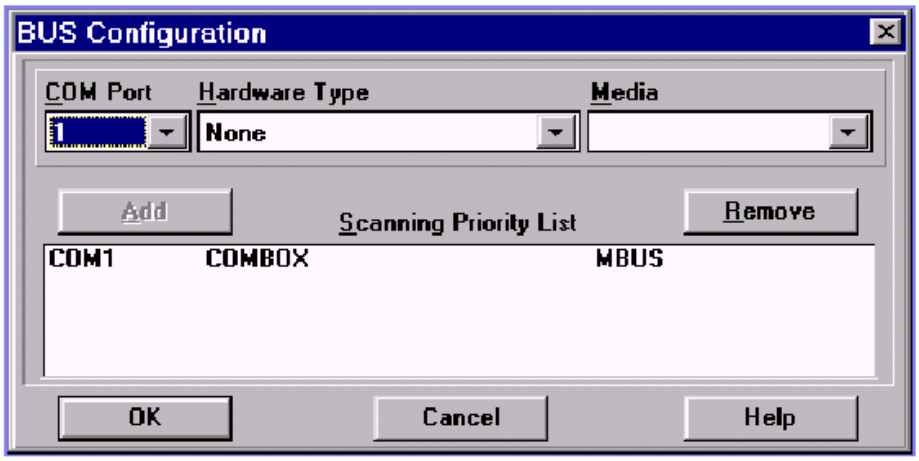

Figure 5. Set Bus Configuration

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Programming with WinTesla Interface

When the system has been setup, SW upgrade can be performed according to following instructions.

1. Insert BBL–3B service battery.
2. Connect SCH–8 cable from FPS–8's **"service cable"** connector to N9210's bottom connector
3. Connect power cable to FPS–8's **"service battery"** connector.
4. Start WinTesla software
5. Select Product –> Open –> RAE–3 (or if WinTesla is already running and N9210 is on Press **"F5"** to initialize connection (see Figure 6)

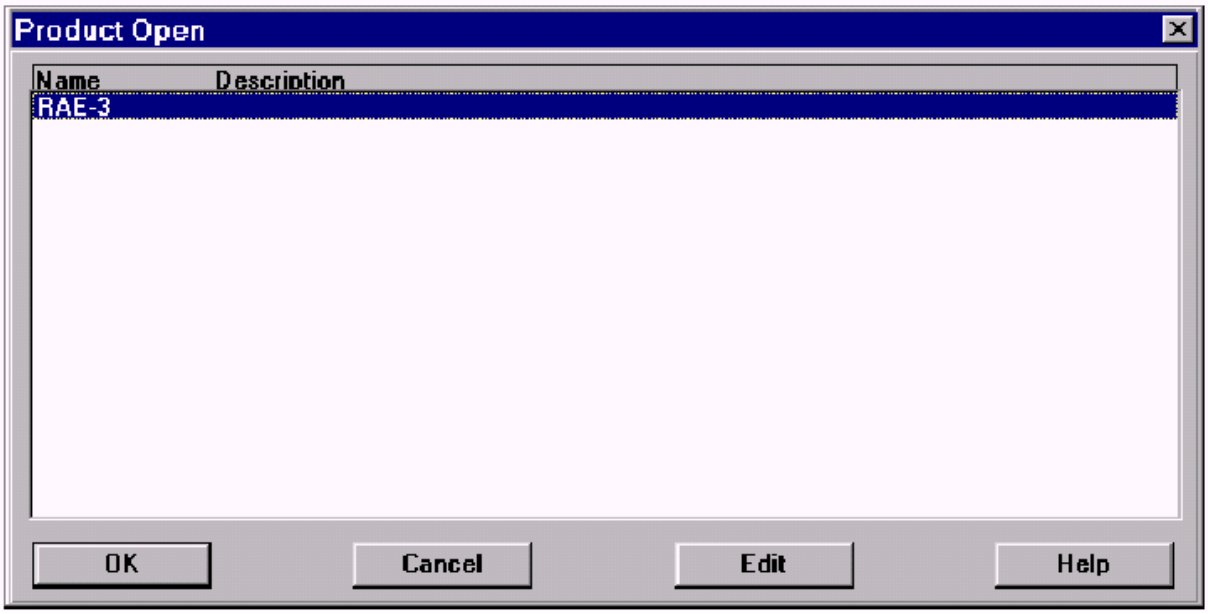

Figure 6. Product Open

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6. Select Dealer –> Flash Phone…

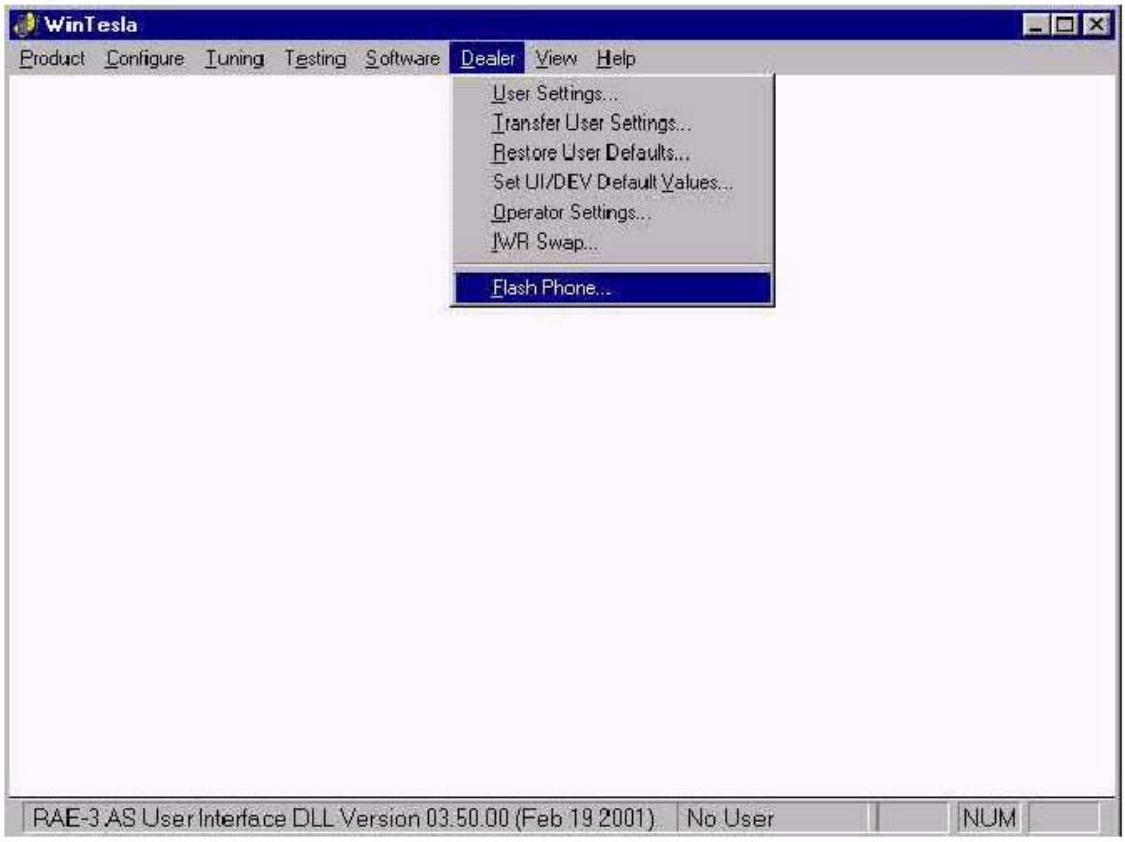

Figure 7. Wintesla user interface when the RAE–3 is running and initialization has been successful.

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8. Flash Phone dialog opens. Select the correct language in the .... Market Area box.

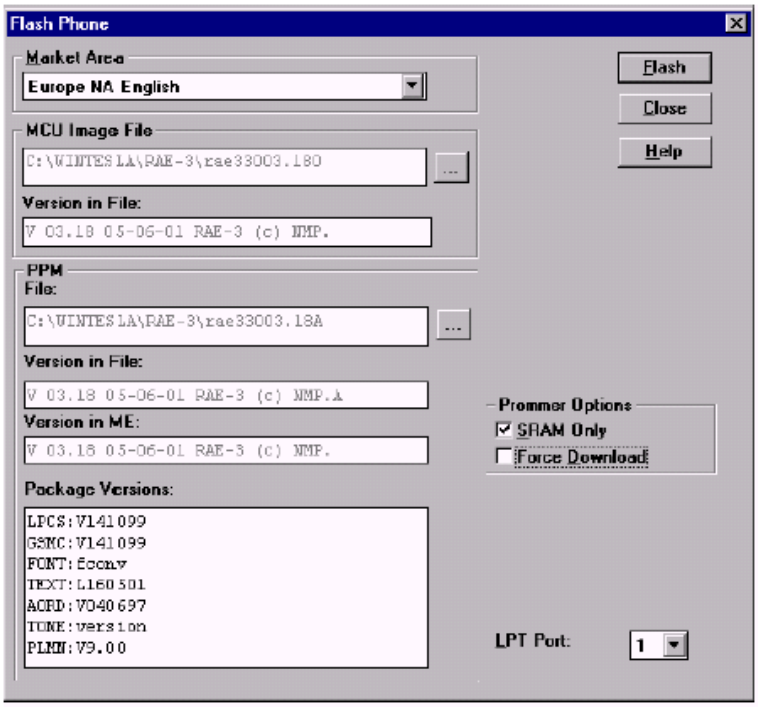

Figure 8. Flash phone –dialog

9. Press **"Flash"** button (see Figure 8)

10. Once the program is prompting for restoring user data choose YES if you want to save user settings to file. (see Figure 9)

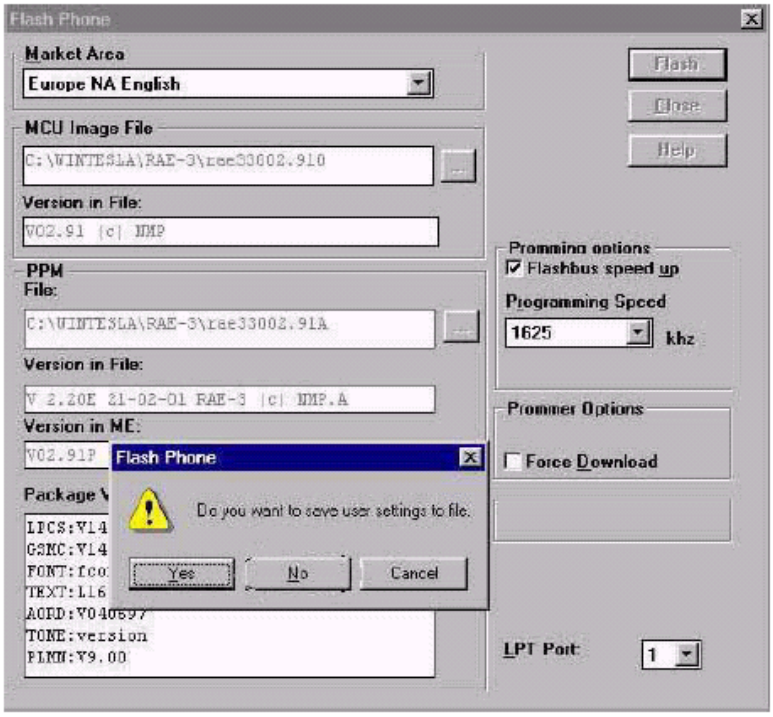

Figure 9. Saving user settings to file

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11. Programming starts (takes about 6 minutes if the images already are stored in the Prommer memory)

12. Flash authority ID, Factory setup values and users settings (optional) are updated automatically.

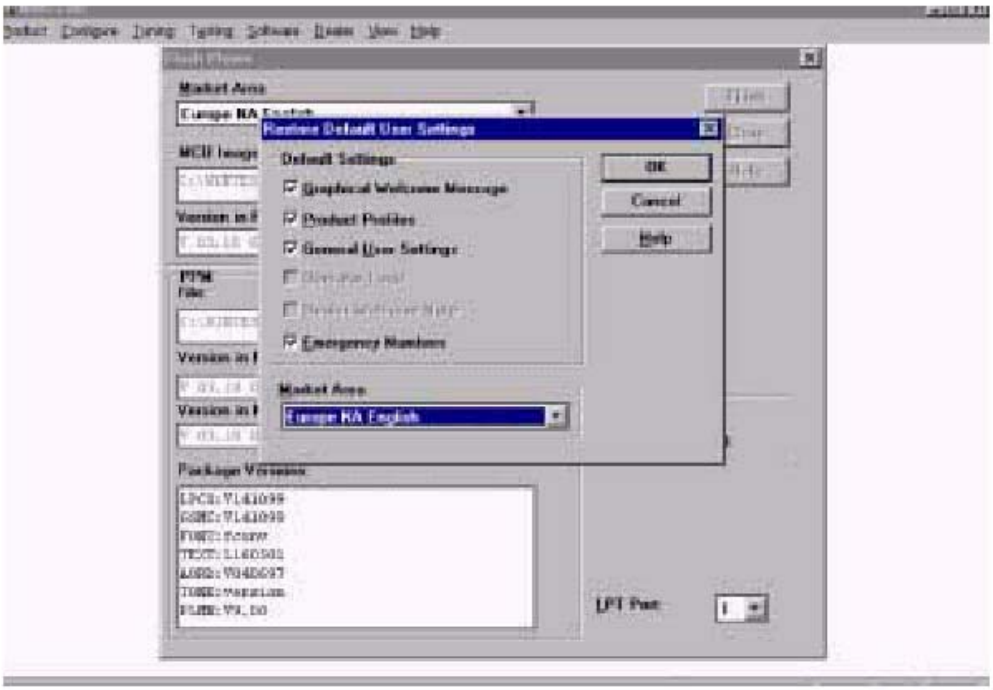

Figure 10. Restoring Default User settings

13. After Flash programming complete message you can close the flash dialog (see Figure 11)

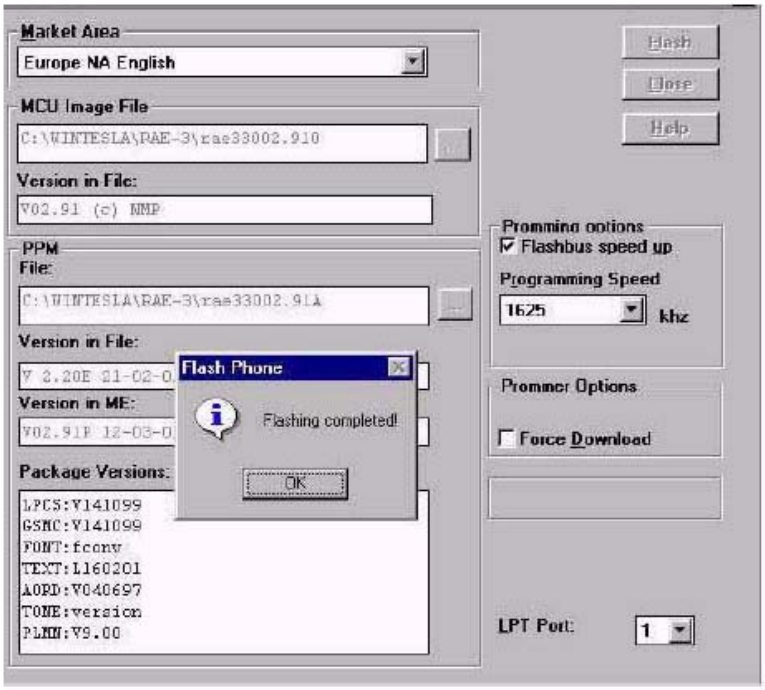

Figure 11. Flash programming completed

14. Disconnect RAE–3

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Troubleshooting for the N9210 SW upgrade

If something went wrong during flashing:

If you have a dead RAE–3

1. Do not try to switch phone on

2. Use product–> Open–> RAE–3. (Figure 12)
Wintesla will prompt you " Did not find a phone in current connection! " Answer Yes.

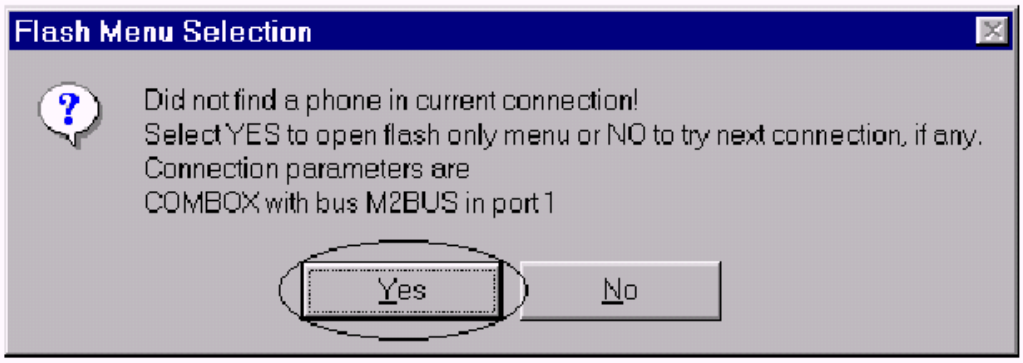
Flash Menu Selection
Did not find a phone in current connection!
Select YES to open flash only menu or NO to try next connection, if any.
Connection parameters are
COMBOX with bus M2BUS in port 1
Yes
No

Figure 12. Flash menu selection

3. Then use Dealer > Flash Phone

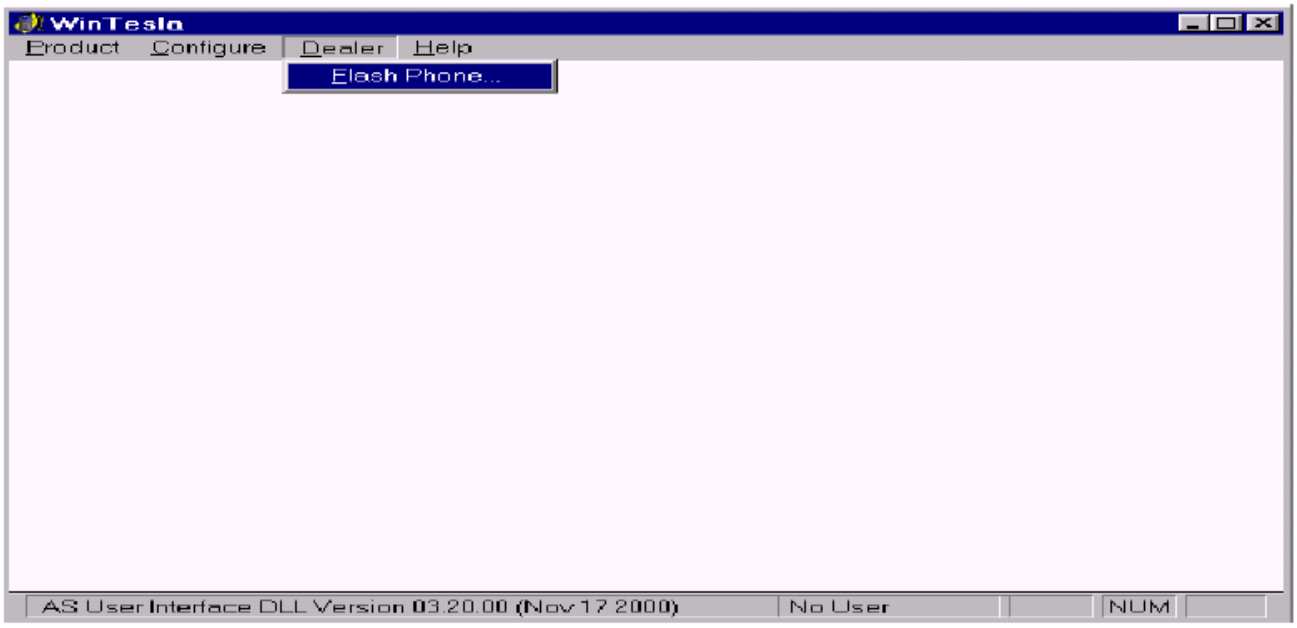

Figure 13. Wintesla dialog when the RAE–3 is not running

4. Because user settings cannot be read, Wintesla will prompt you " Failed to communicate with phone. Settings cannot be saved. Do you want to continue? " Answer Yes.

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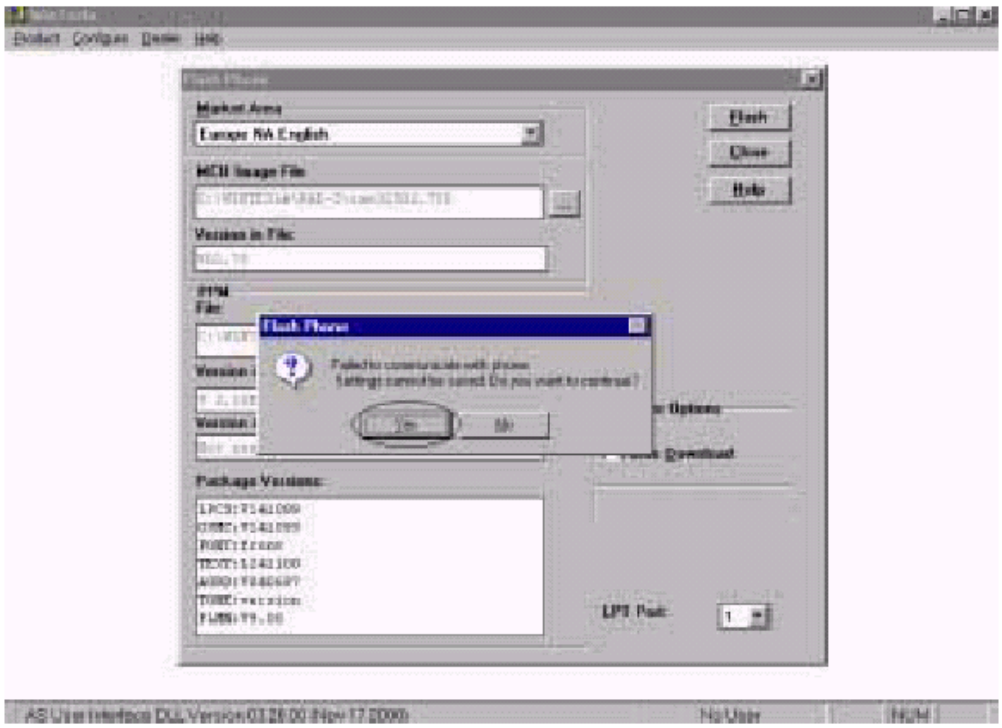

Figure 14. Wintesla cannot read user settings

5. If Flash authority ID writing fails ( ) after flashing:
. . . . . FPS–8 may not be activated,

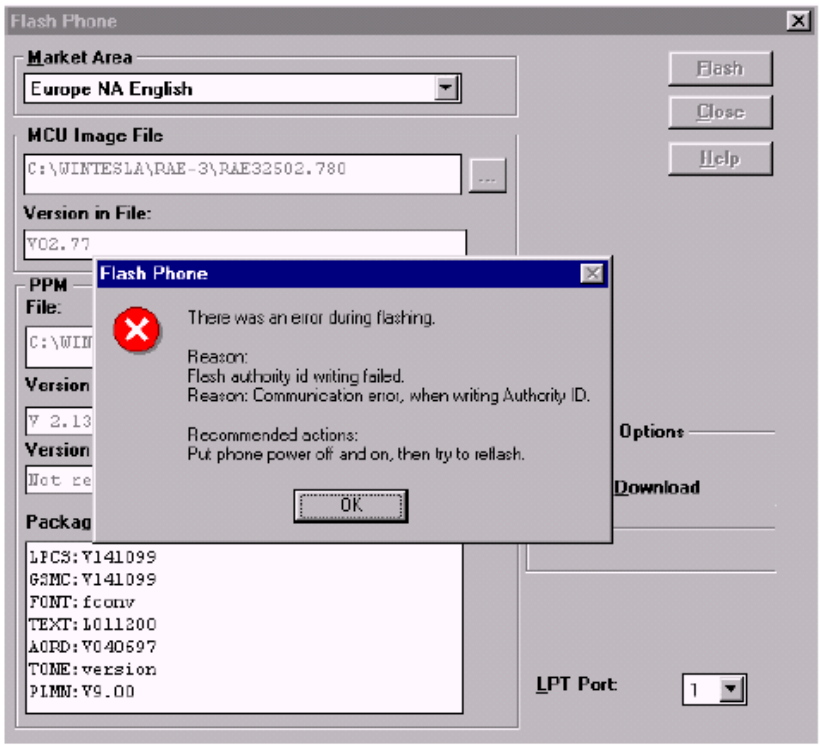

Figure 15. Flash authority ID writing failed

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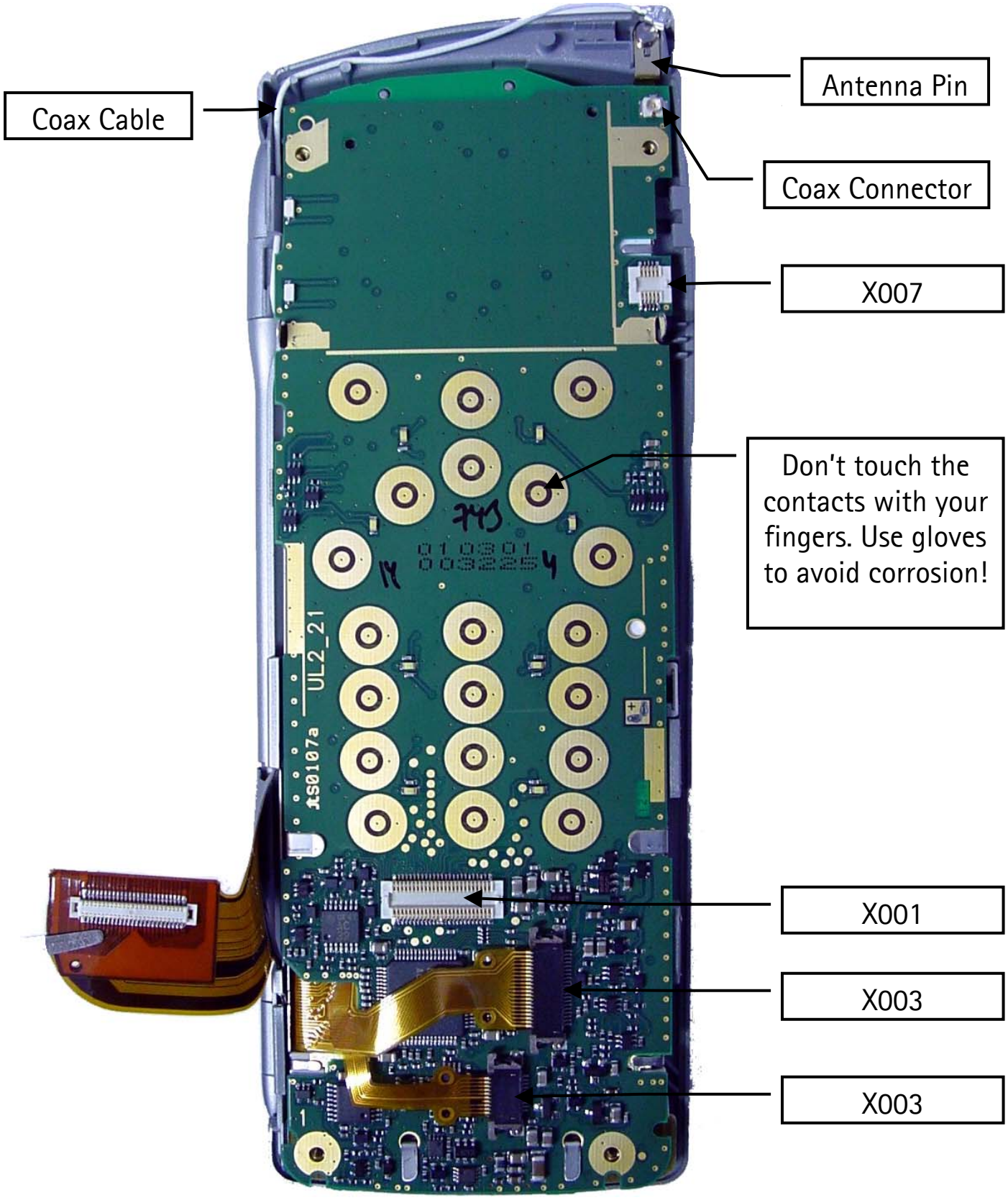
7. USER INTERFACE LAYOUT



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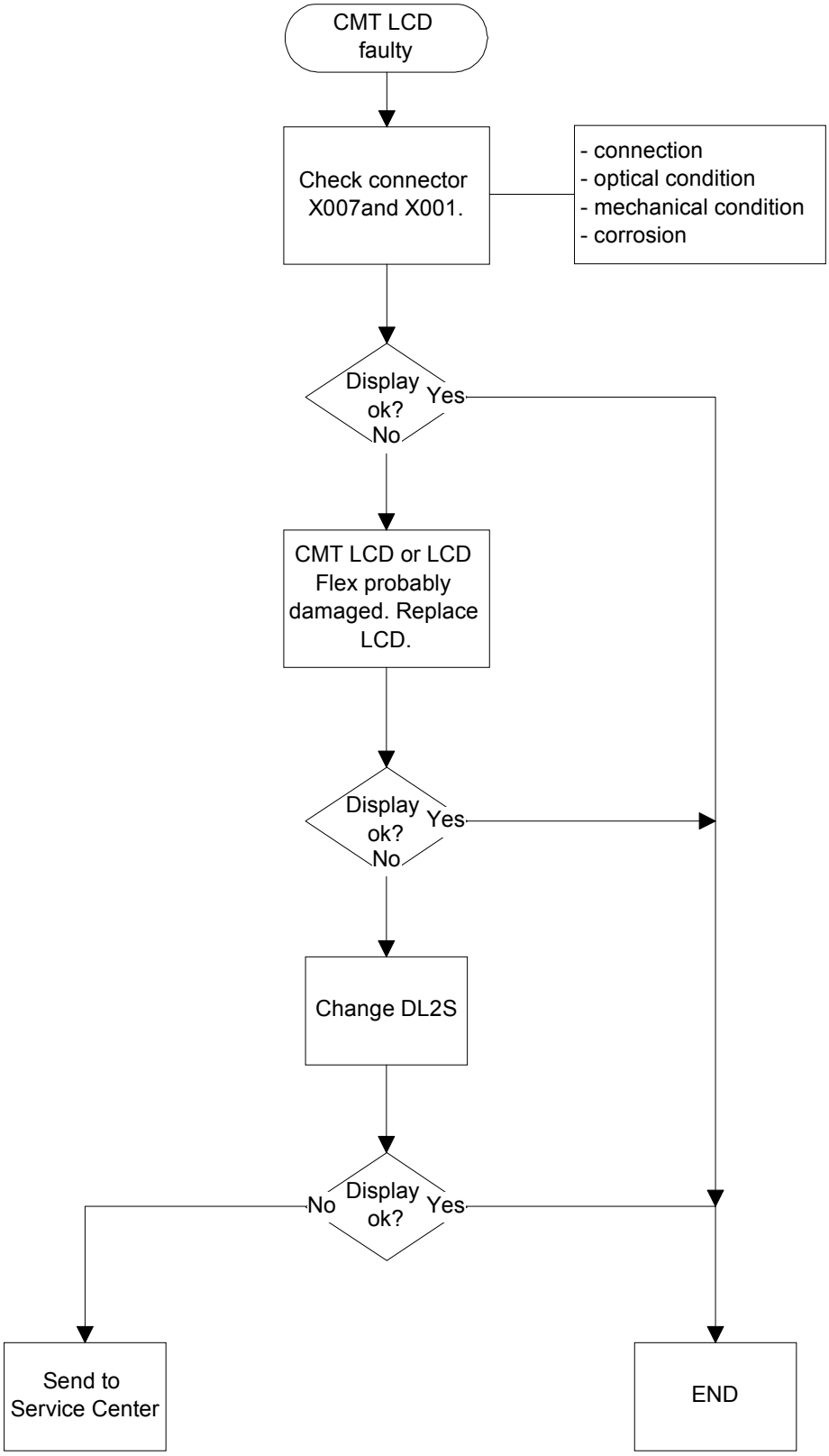
8. TROUBLESHOOTING

8.1 NO CHARACTERS ON CMT LCD



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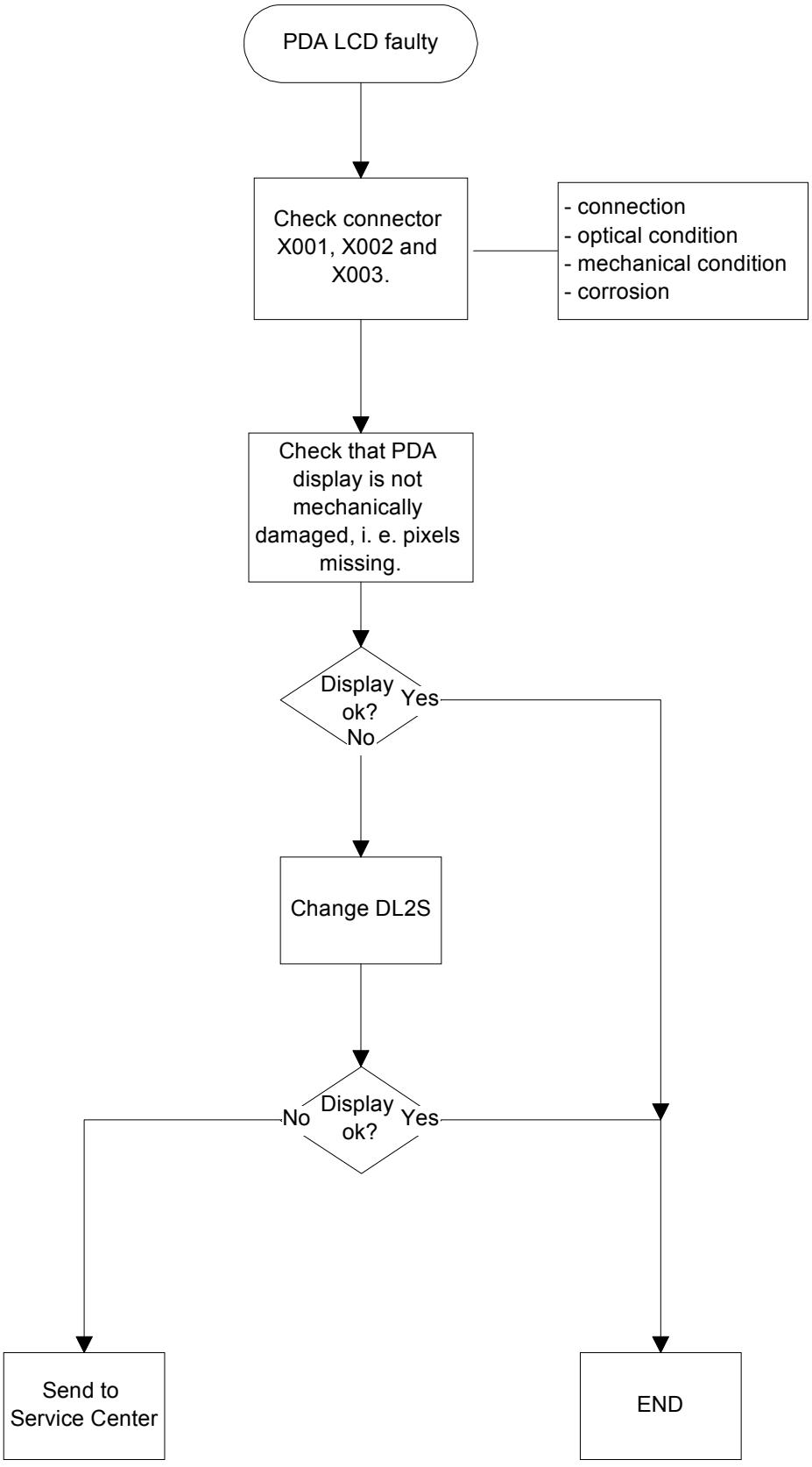
8.2 No PDA LCD function



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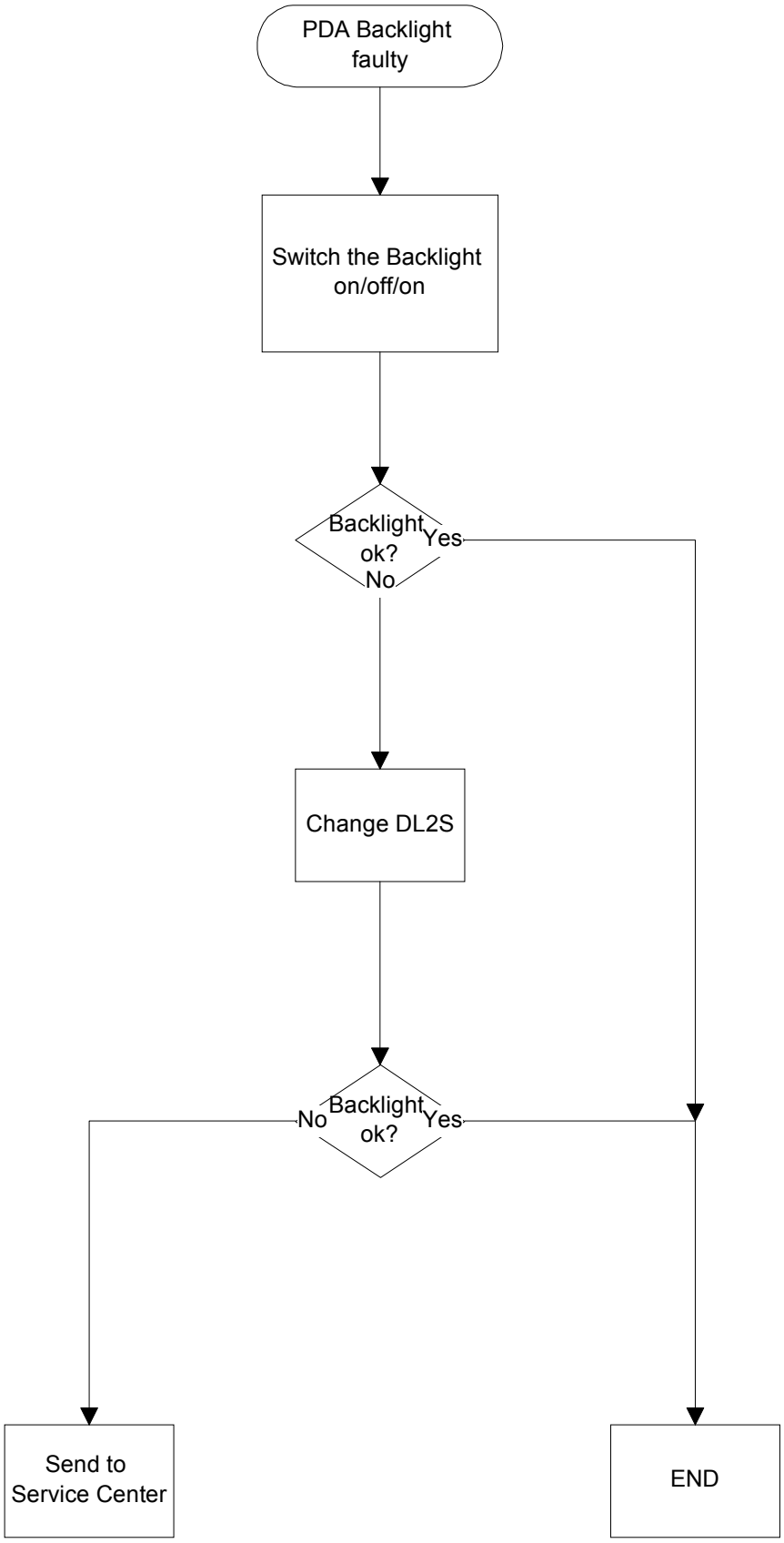
8.3 No PDA backlight



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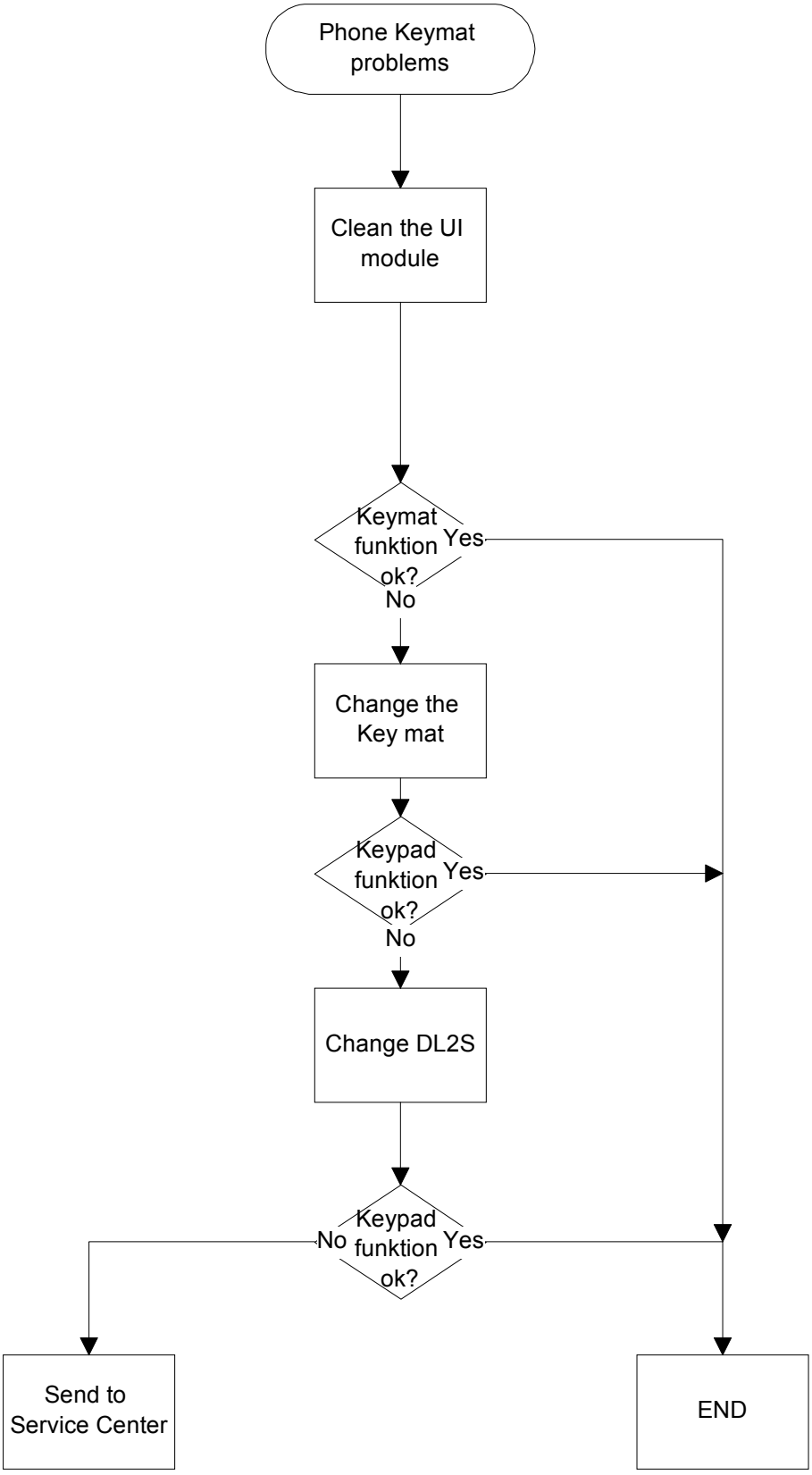
8.4 Phone keymat problems



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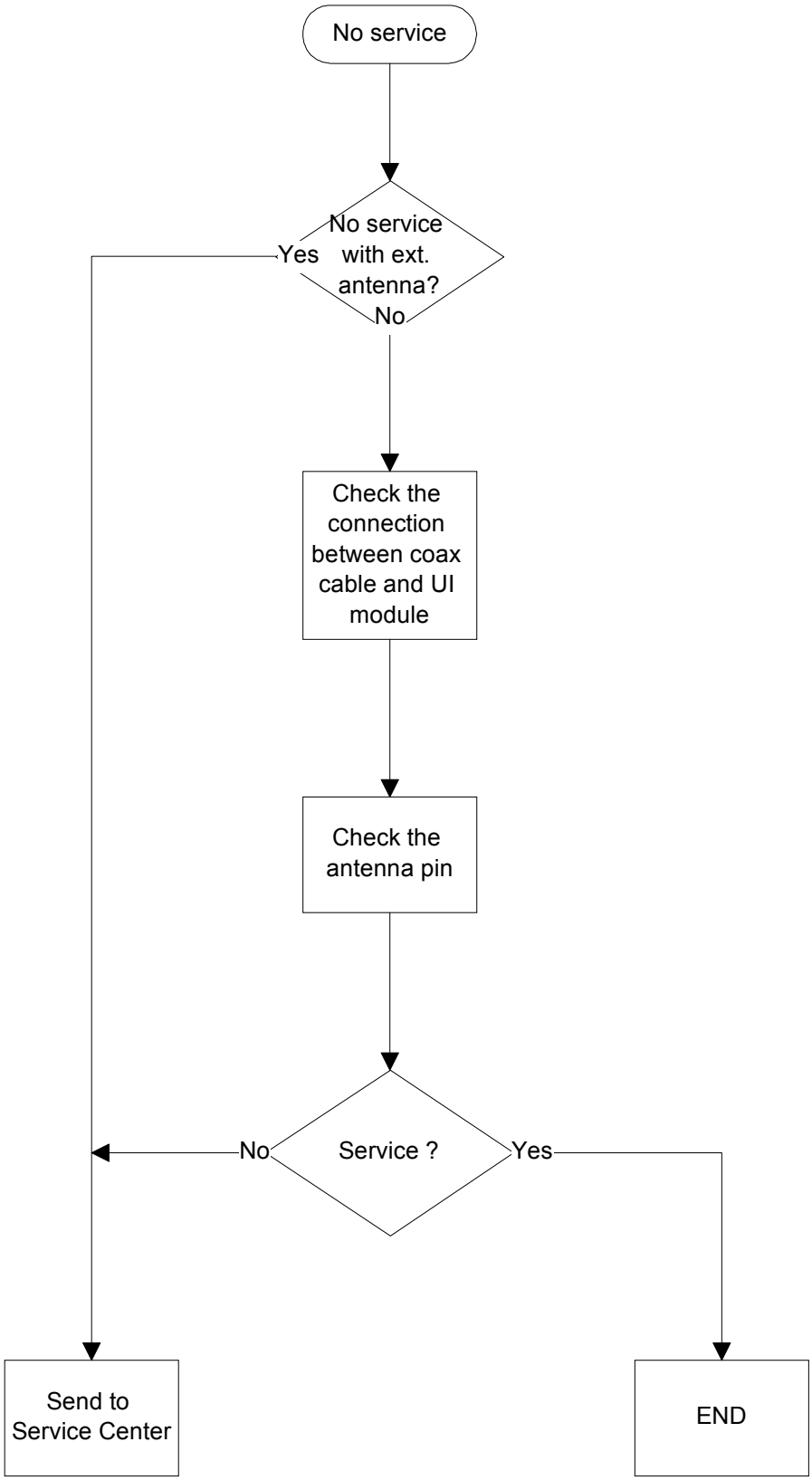
8.5 No service



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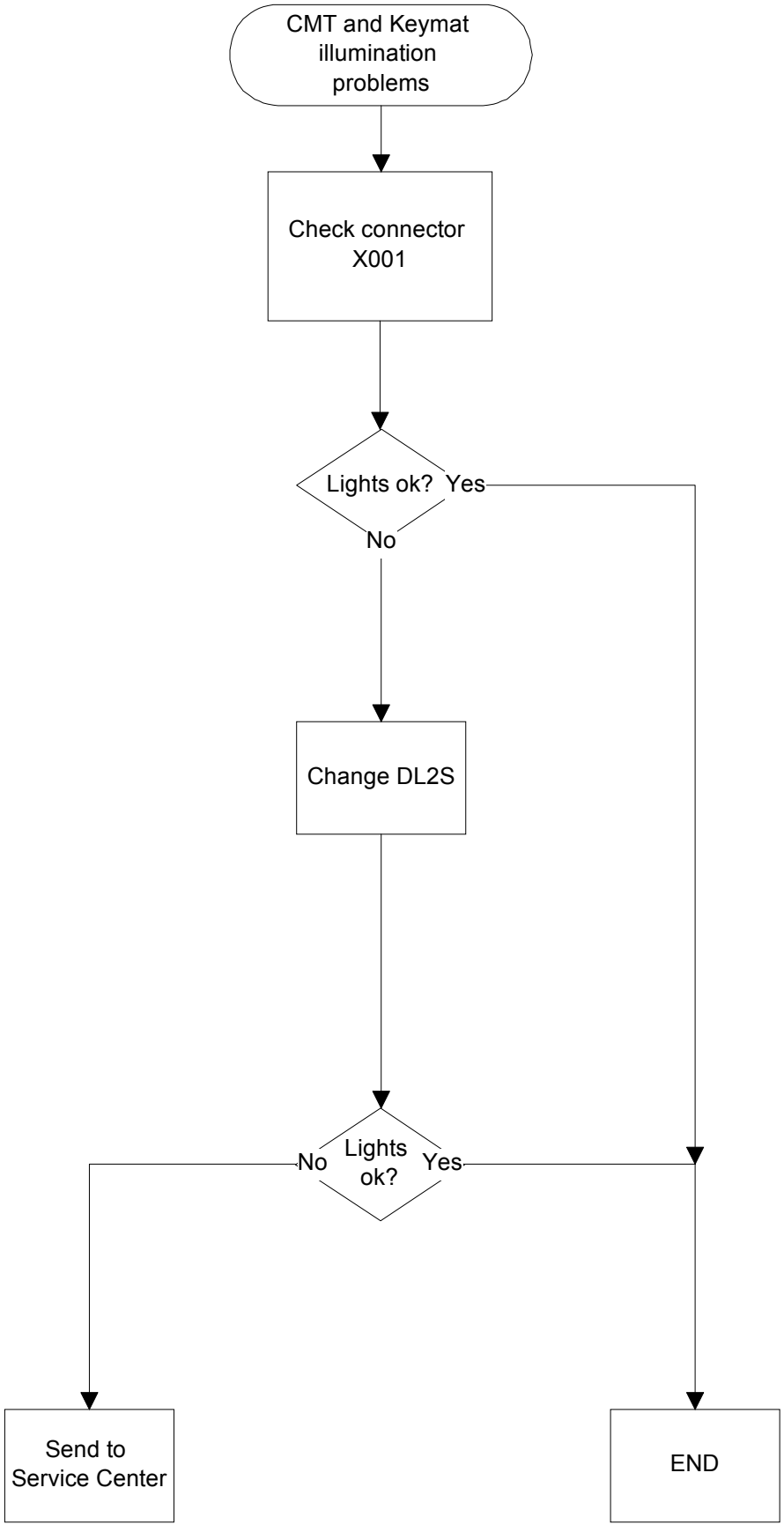
8.6 CMT and keymat illumination problems



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9. ESD PROTECTION REQUIREMENTS

	Electrostatic discharge can easily damage the sensitive components of electronic products. Therefore every Service Partner has to take care of at least some precautions like ESD restricted area, floor, table, covering, chair(s), shoes or armwrist.

Please refer to the Extranet document
ESD protection requirements for NMP Service Level 1/2 Service Suppliers

example configuration of an epa-area source: www.armeka.com	example configuration of a workbench source: www.warmbier.com

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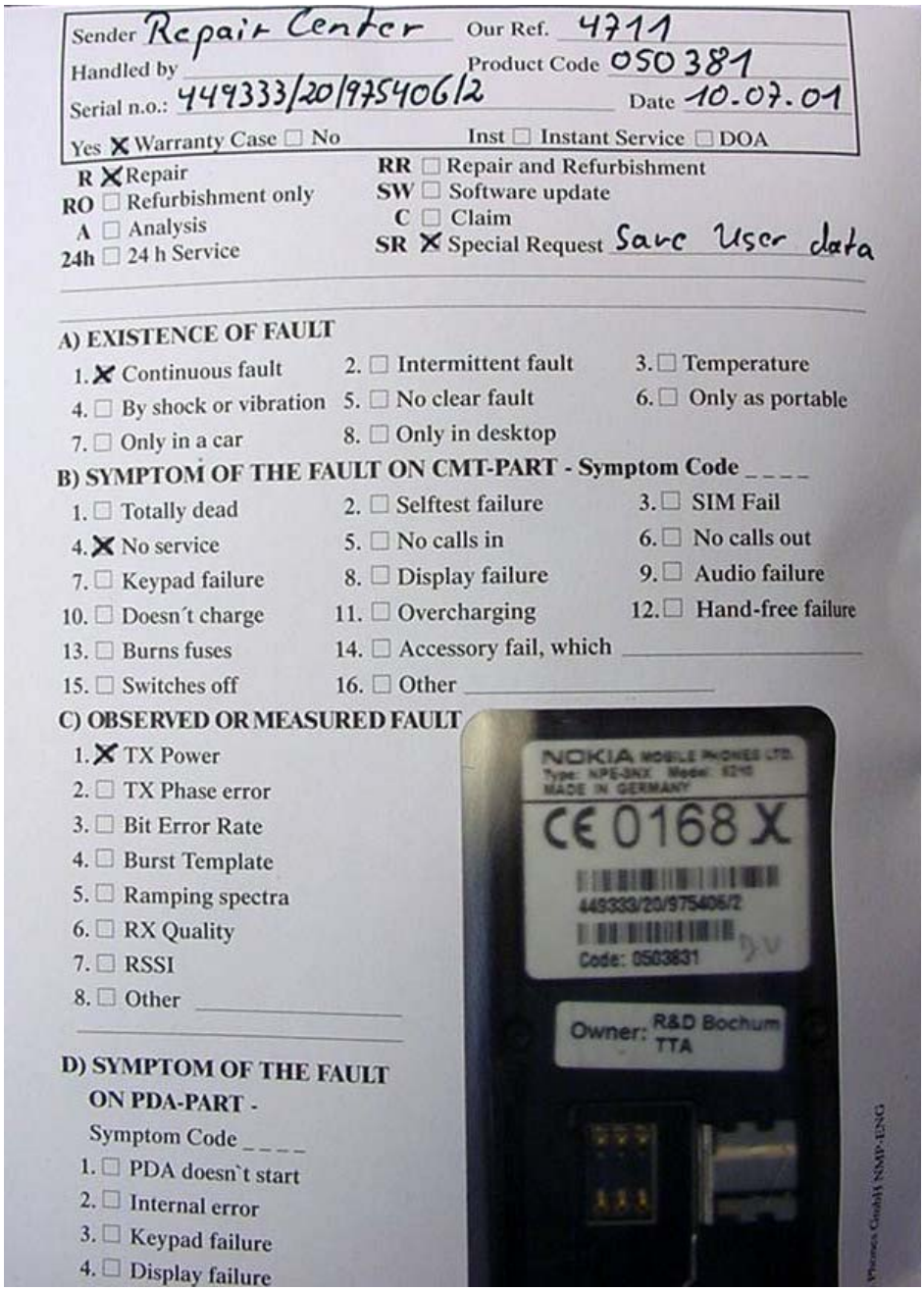
10. SERVICE NOTES

We recommend using Service Notes when shipping phones to other Service Partners. It prevents the product from scratches, it is ESD-proved and has the possibility to give vavuable feedback of the fault symptom through a structured form. Please refer to the Extranet document **Service Notes for faulty NMP transceiver** to get further information.



Sender Repair Center Our Ref. 4711
Handled by Product Code 050381
Serial n.o.: 449333/20/975406/2 Date 10.07.01
Yes X Warranty Case ☐ No Inst ☐ Instant Service ☐ DOA

R X Repair
RO ☐ Refurbishment only
A ☐ Analysis
24h ☐ 24 h Service
RR ☐ Repair and Refurbishment
SW ☐ Software update
C ☐ Claim
SR X Special Request Save User data

A) EXISTENCE OF FAULT
1. X Continuous fault 2. ☐ Intermittent fault 3. ☐ Temperature
4. ☐ By shock or vibration 5. ☐ No clear fault 6. ☐ Only as portable
7. ☐ Only in a car 8. ☐ Only in desktop

B) SYMPTOM OF THE FAULT ON CMT-PART - Symptom Code ____
1. ☐ Totally dead 2. ☐ Selftest failure 3. ☐ SIM Fail
4. X No service 5. ☐ No calls in 6. ☐ No calls out
7. ☐ Keypad failure 8. ☐ Display failure 9. ☐ Audio failure
10. ☐ Doesn´t charge 11. ☐ Overcharging 12. ☐ Hand-free failure
13. ☐ Burns fuses 14. ☐ Accessory fail, which _____
15. ☐ Switches off 16. ☐ Other _____

C) OBSERVED OR MEASURED FAULT
1. X TX Power
2. ☐ TX Phase error
3. ☐ Bit Error Rate
4. ☐ Burst Template
5. ☐ Ramping spectra
6. ☐ RX Quality
7. ☐ RSSI
8. ☐ Other _____

D) SYMPTOM OF THE FAULT ON PDA-PART -
Symptom Code ____
1. ☐ PDA doesn`t start
2. ☐ Internal error
3. ☐ Keypad failure
4. ☐ Display failure

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11. GONOGO TESTER

The Acterna/Wavetek GoNoGo Tester has to be used to carry out the final test after your service action to guarantee the functionality of the phone. **Please refer to the actual information in the Nokia Care Point Extranet within the Partner Websites (IWR/PWS).**	

12. BATTERYTESTER

The Astratec battery tester lets you test the capacity of Nokia batteries. **Please refer to the actual information in the Nokia Care Point Extranet within the Partner Websites (IWR/PWS).**	

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